

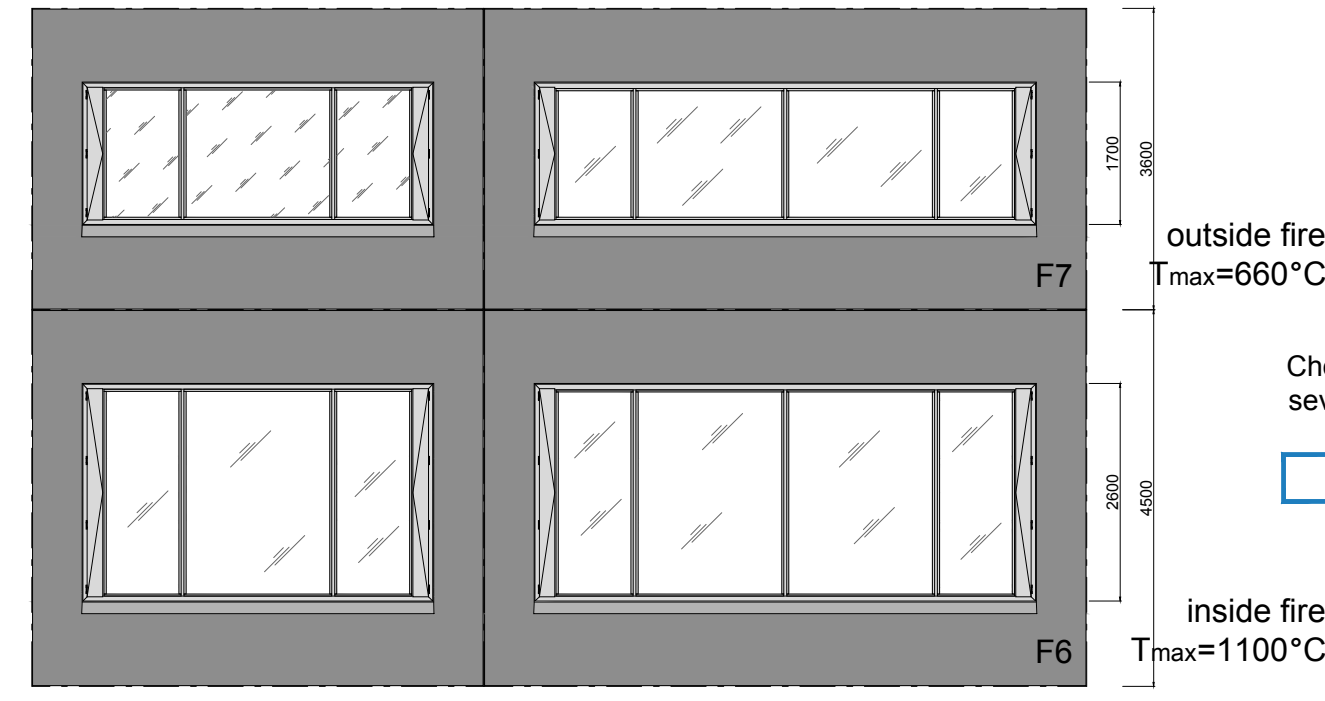
Abstraction



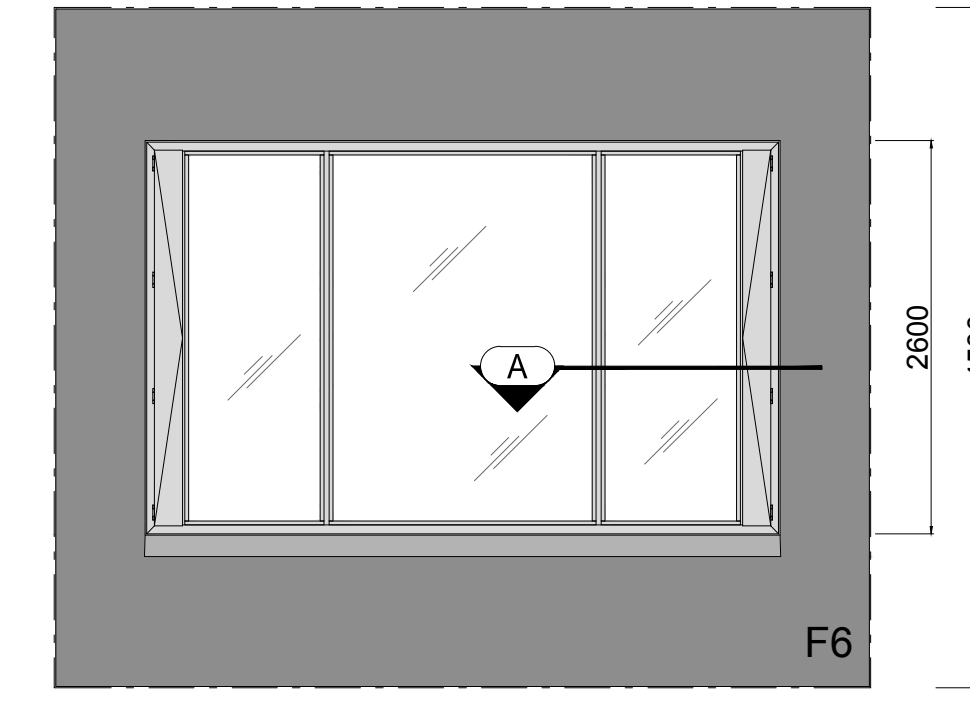
Regions of fire-rated composite facade



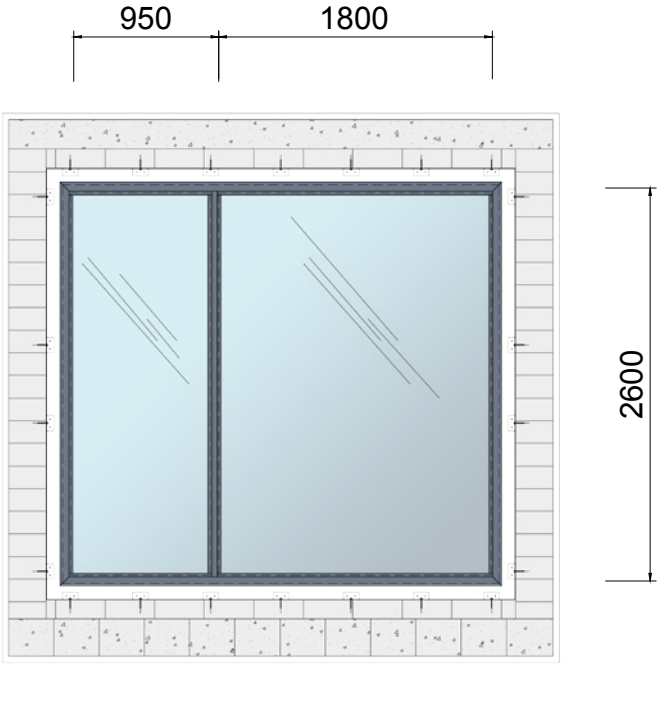
One element of the composite facade



Facade types according to the grids

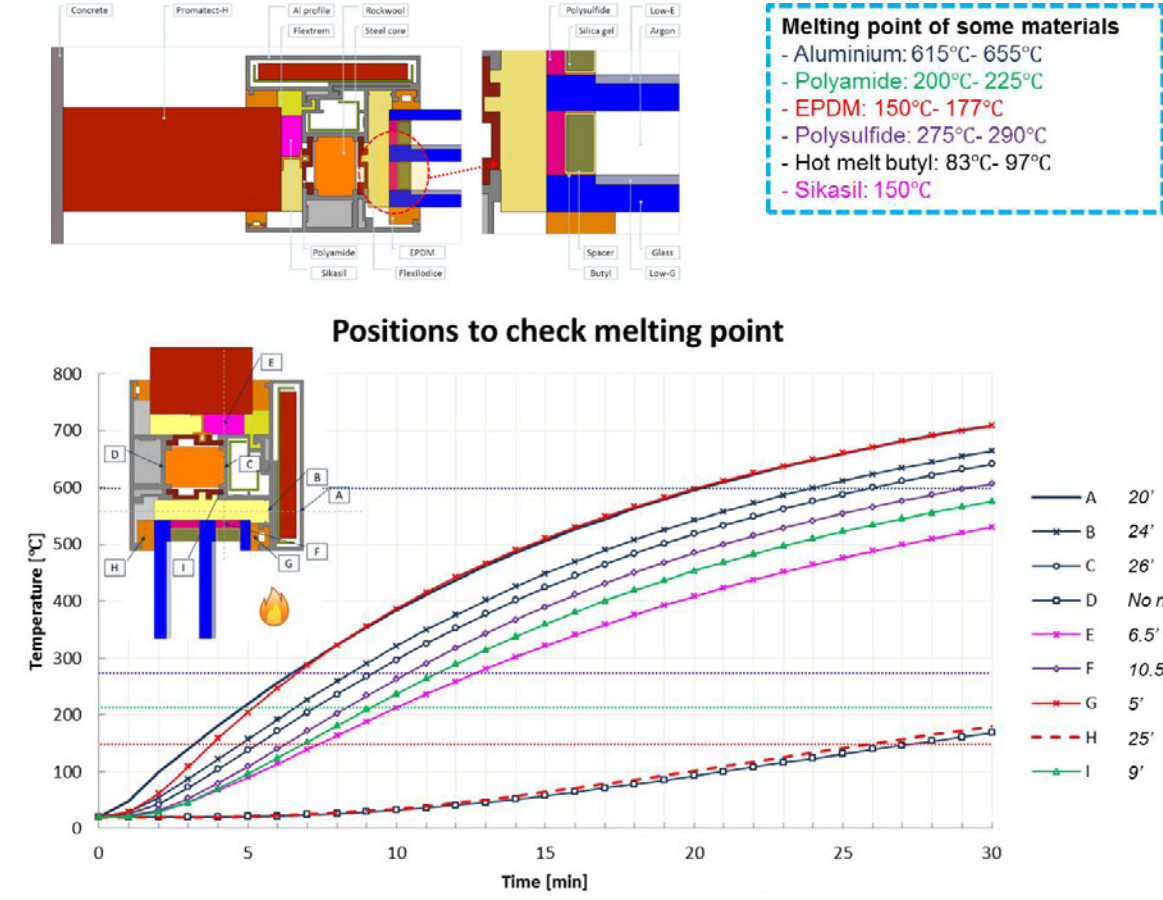
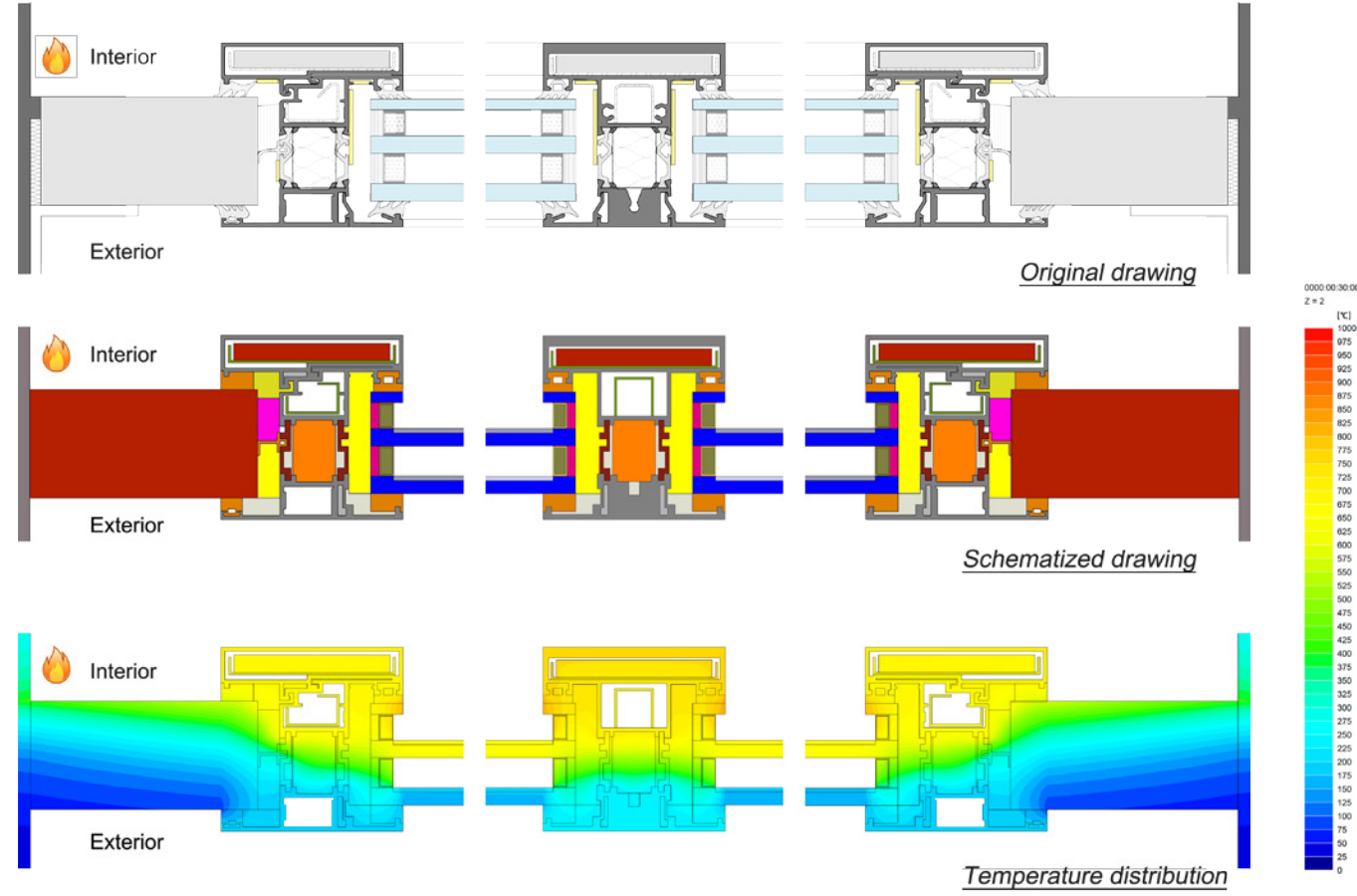


Fire-resistance of F6: EW 30 (i-o) 1:50

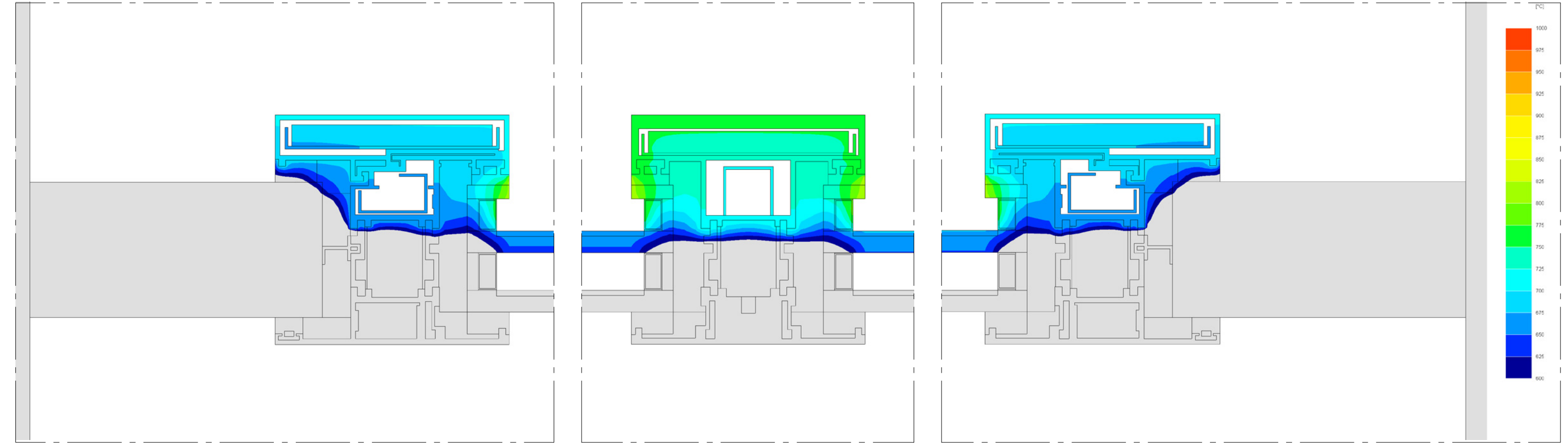


Testing element 1:50

Fire calculations

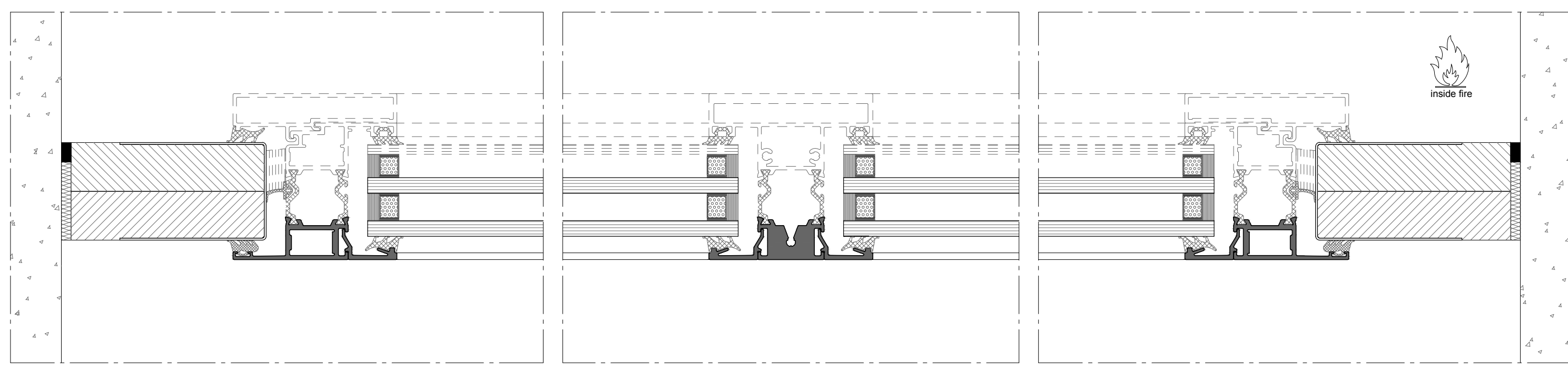


Calculation result

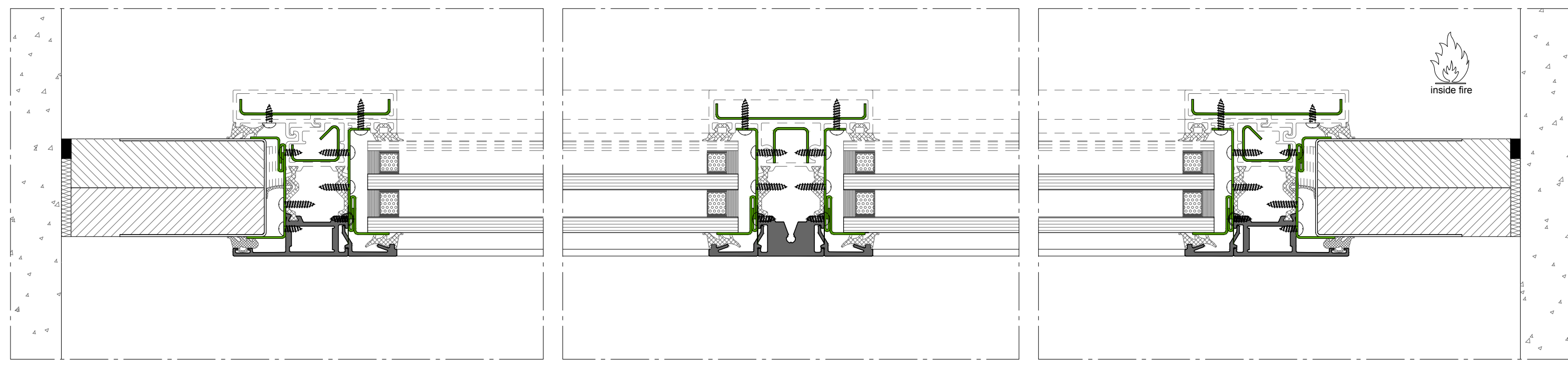


Areas $\geq 600^\circ\text{C}$ after 30min

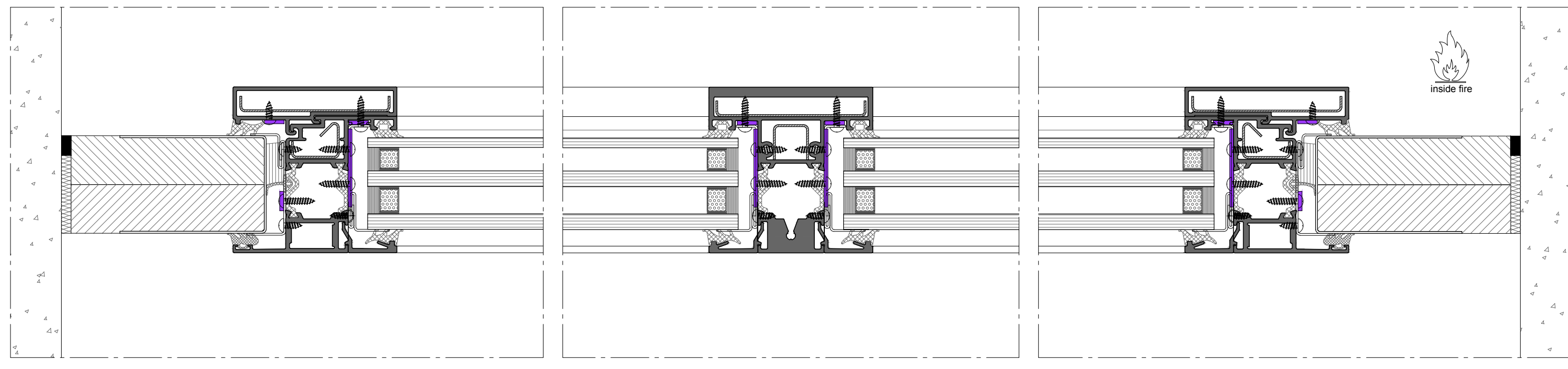
Round 1 (based on simulation result)



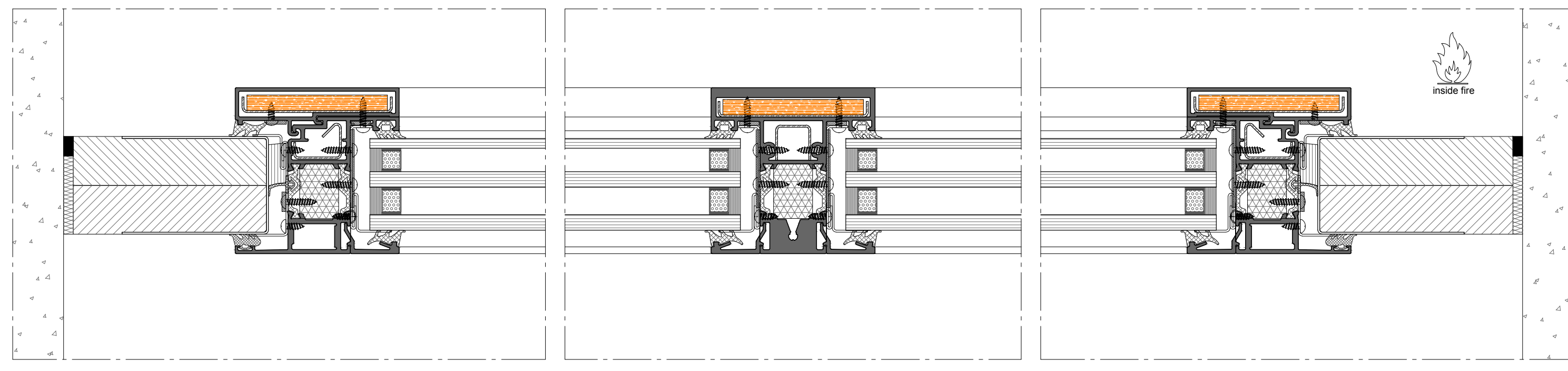
Horizontal section: the remaining structure



Additional steel cores & clips for structural integrity



Intumescent tapes for gaps & insulation

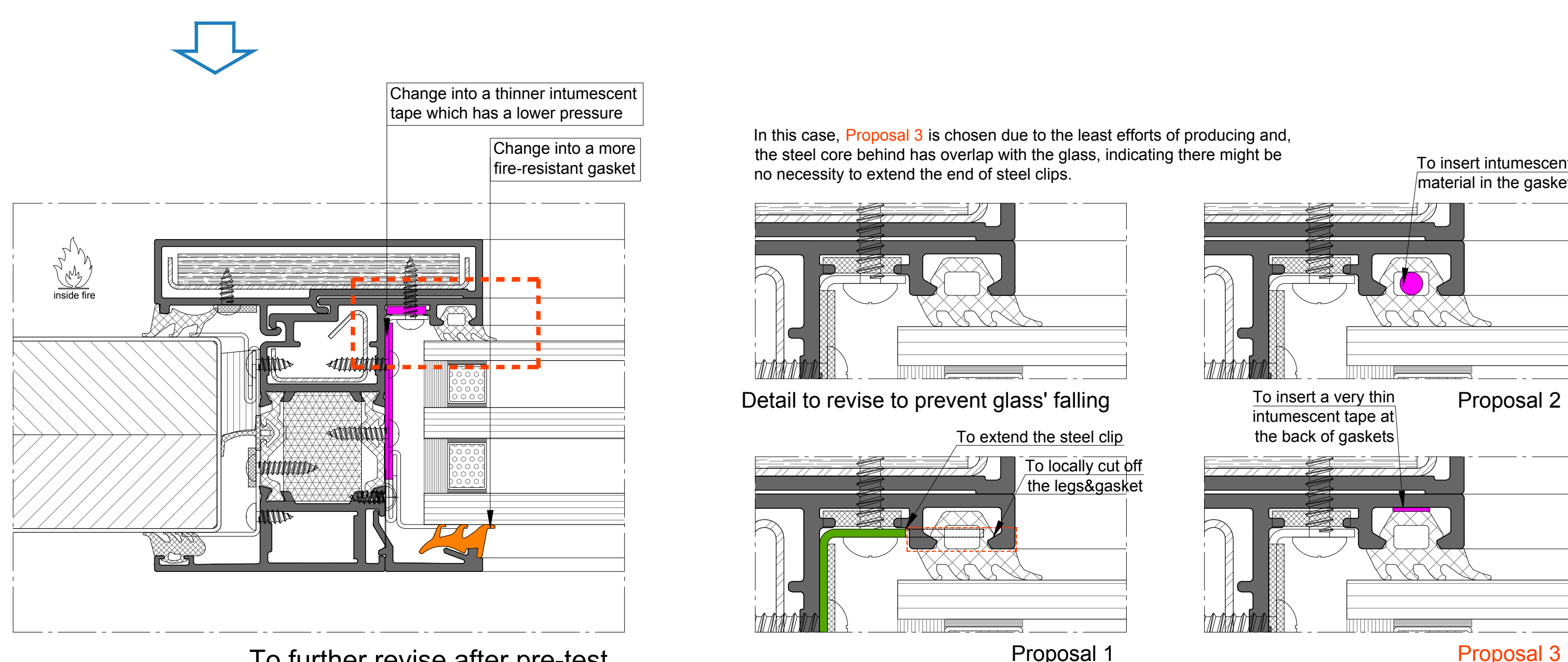


Rockwool to enhance insulation and Promatect boards to further cool down

Round 2 (based on observation of the pre-test)



Facts of the pre-test

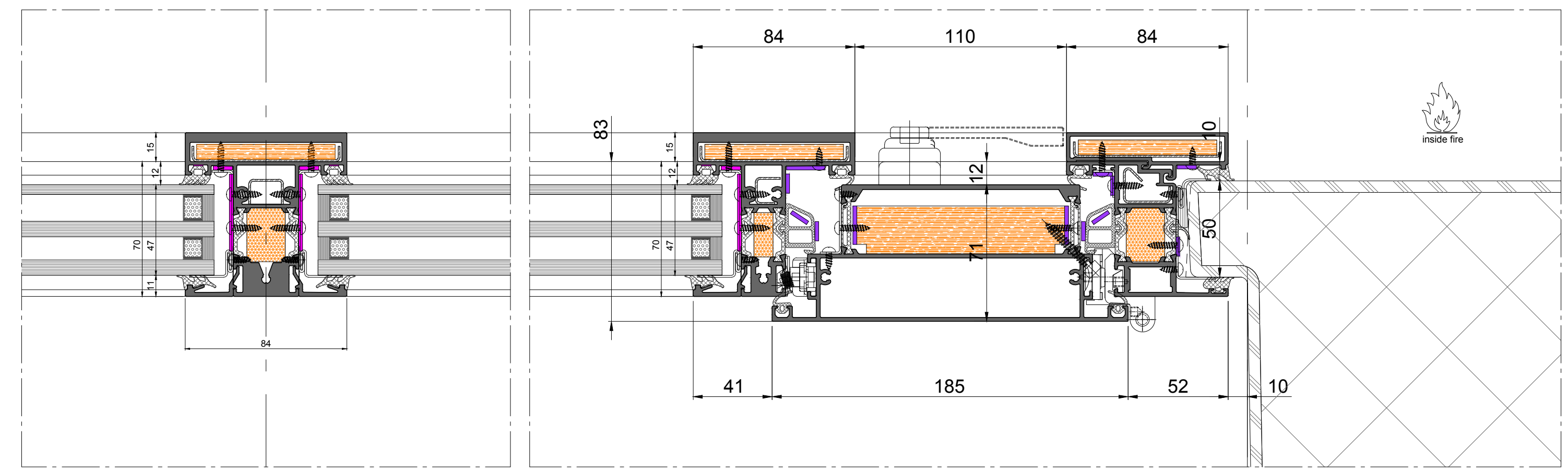


To further revise after pre-test

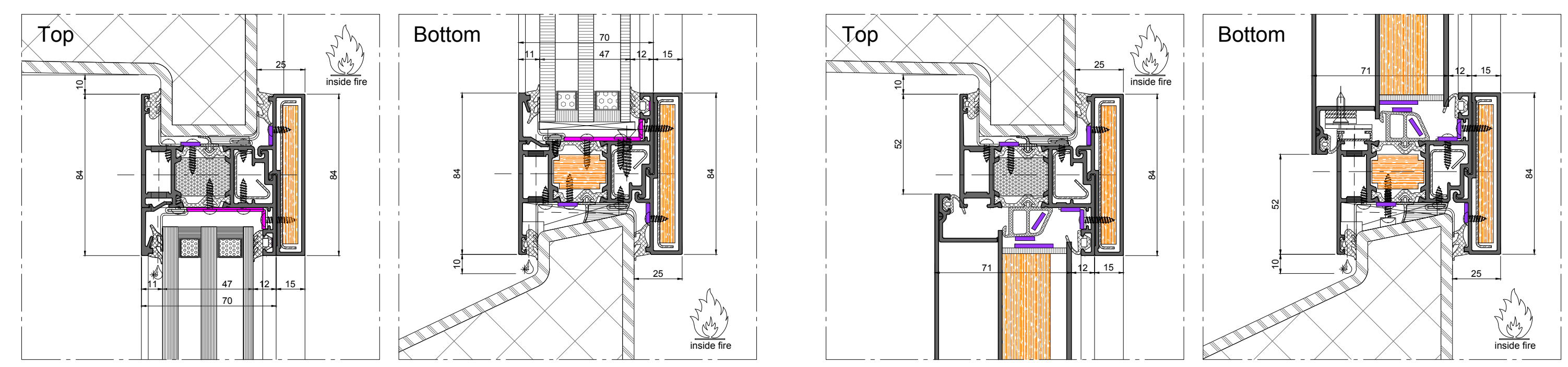
Proposal 1

Proposal 3

Result of Round 2 on the real element



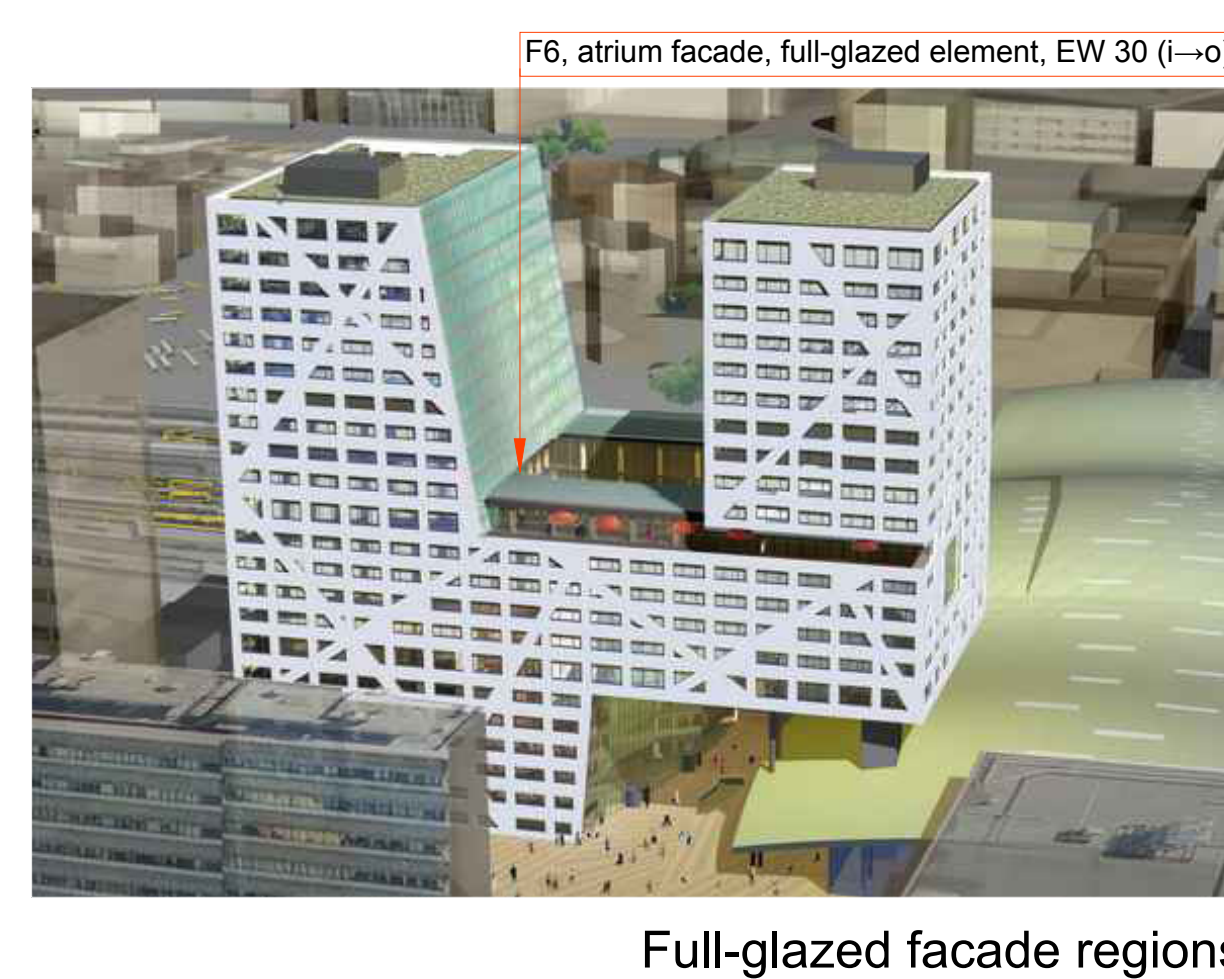
Fire-resistant design, Round 2, horizontal section 1:2



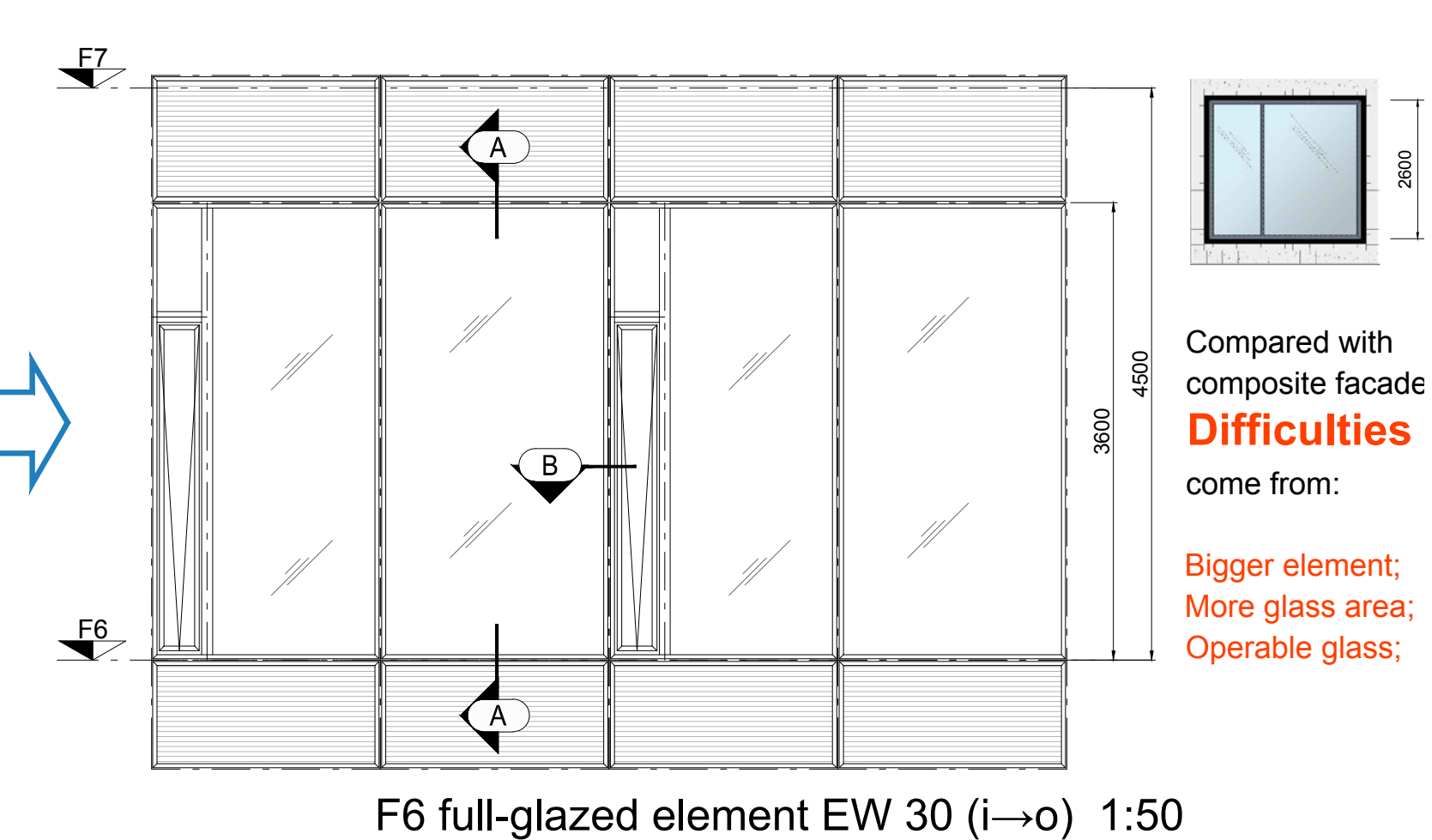
Fire-resistant design, Round 2, vertical section

Fire-resistant design, Round 2, Operable part, vertical section

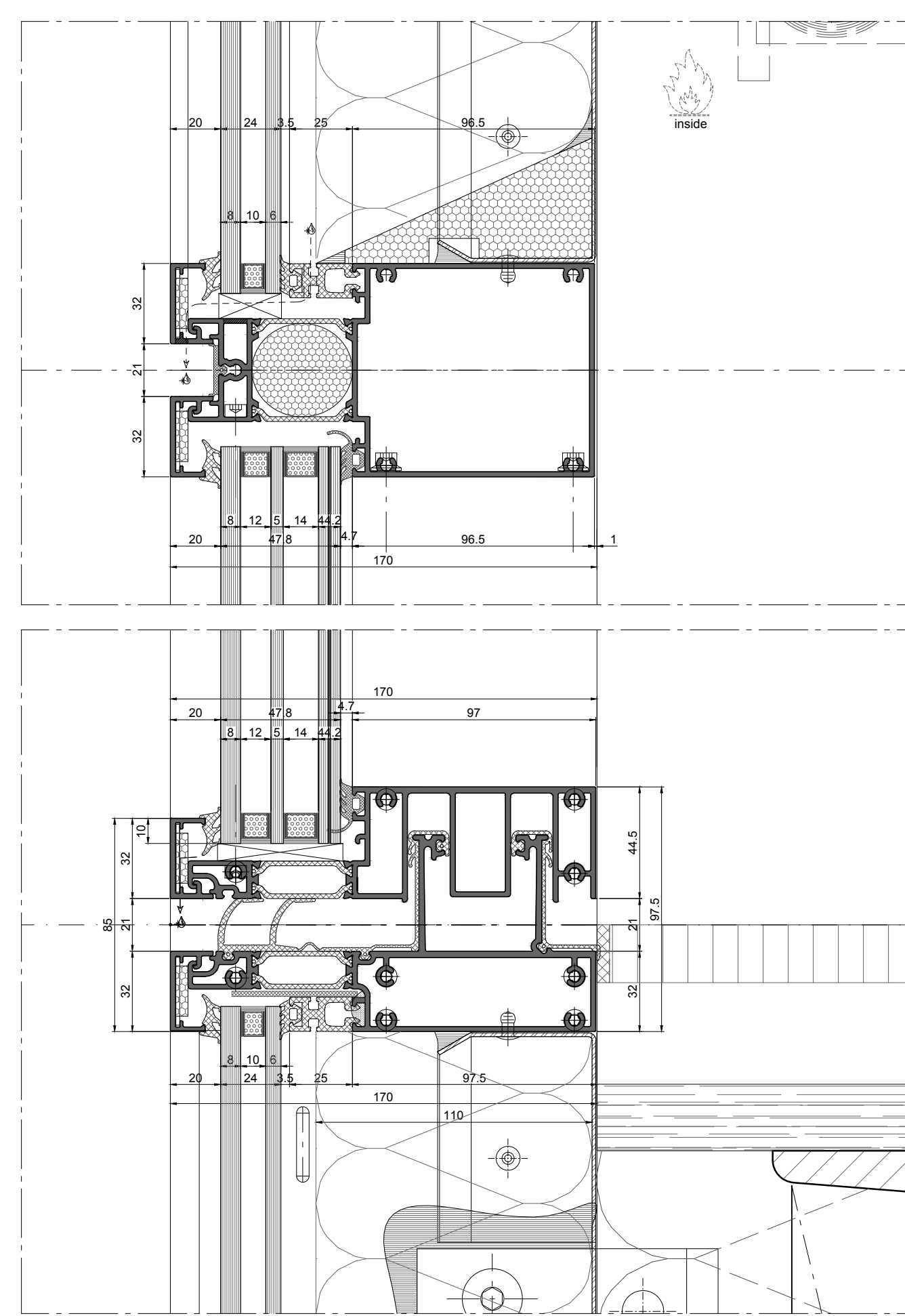
Round 3 (application to the other type of facade in the same project based on experience)



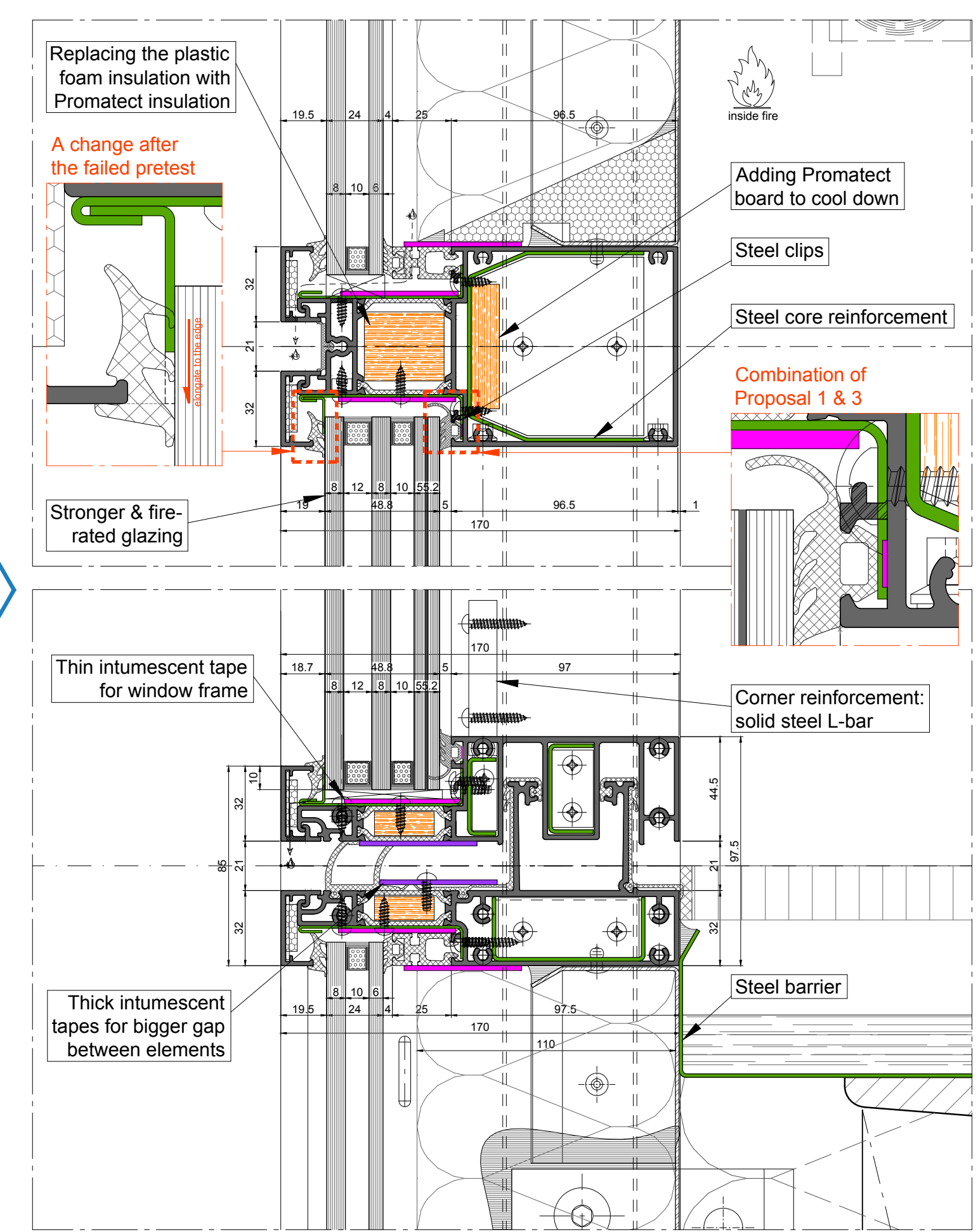
Full-glazed facade regions



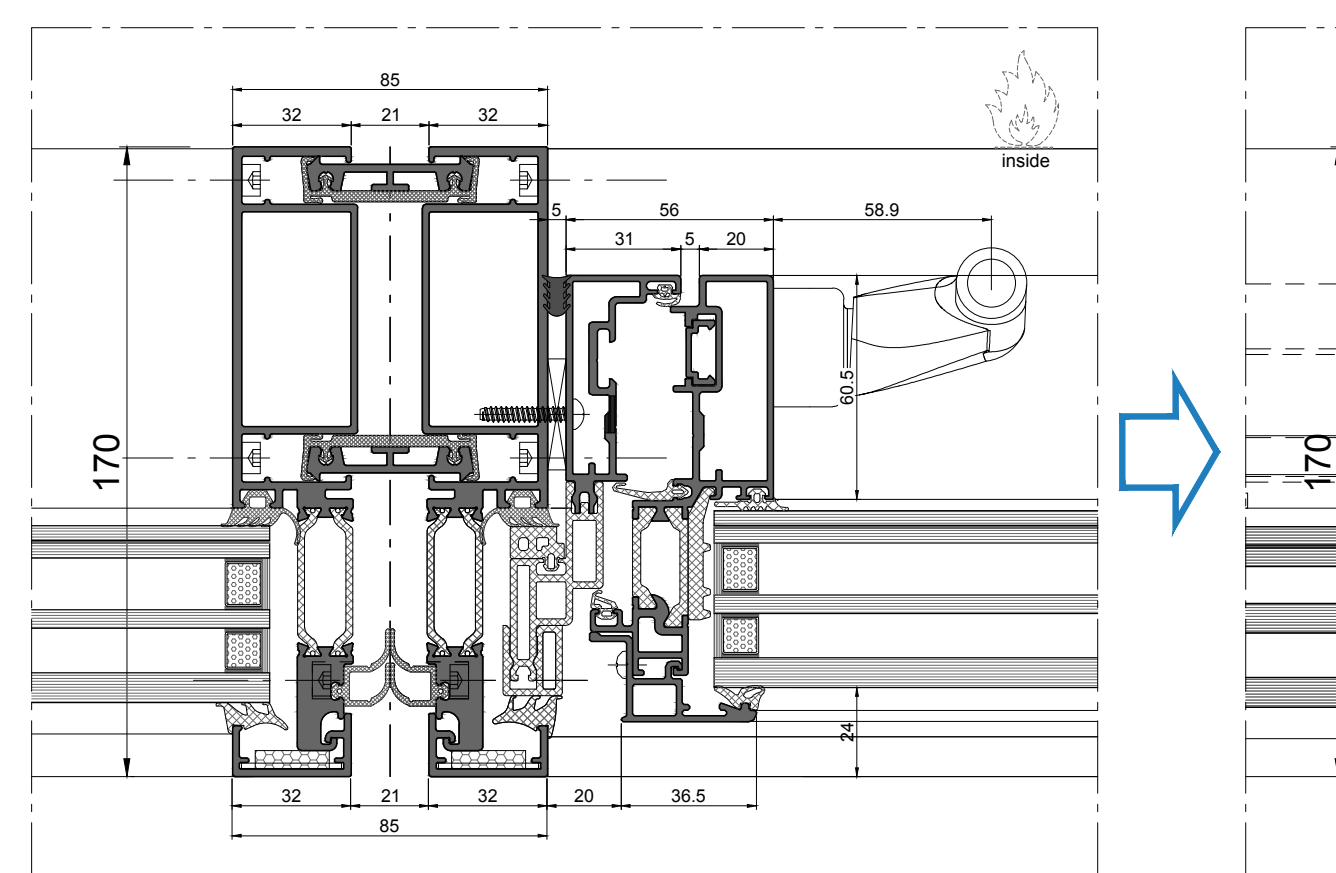
F6 full-glazed element EW 30 (i-o) 1:50



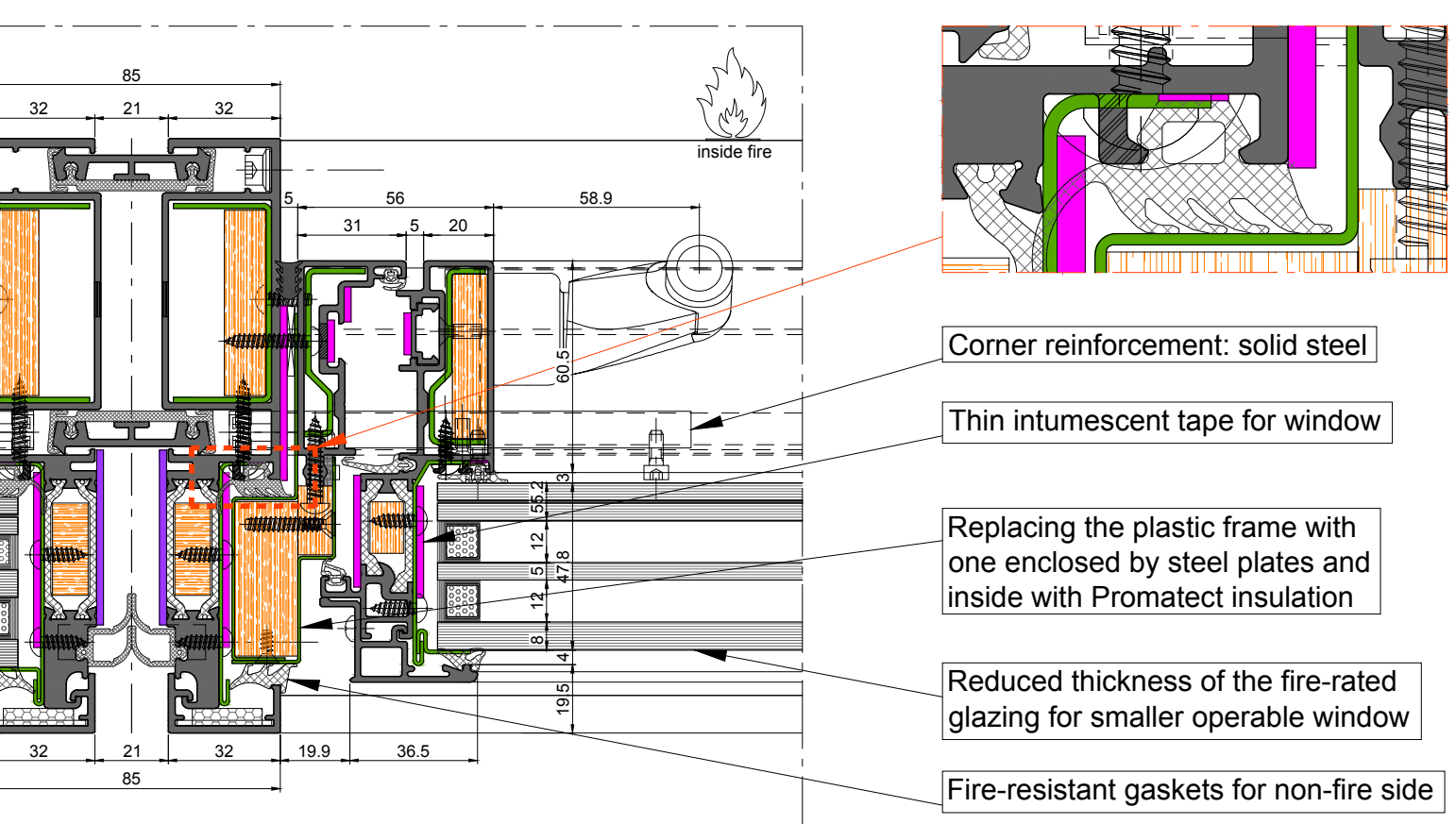
Standard element, section A-A 1:2



Fire-resistant design, section A-A 1:2



Standard element, section B 1:2



Fire-resistant design, section B 1:2