

Fully glazed façade conception for a villa with special
and large-sized glass panels

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- **Façade cladding, façade concept development**
- **Different type elements and envelope areas**
 - Opaque façade cladding
 - Transparent double skin windows
 - Transparent frameless sliding windows with glass barriers
 - Large size fixed windows
 - Barriers and balcony cladding
 - Opaque ceiling cladding

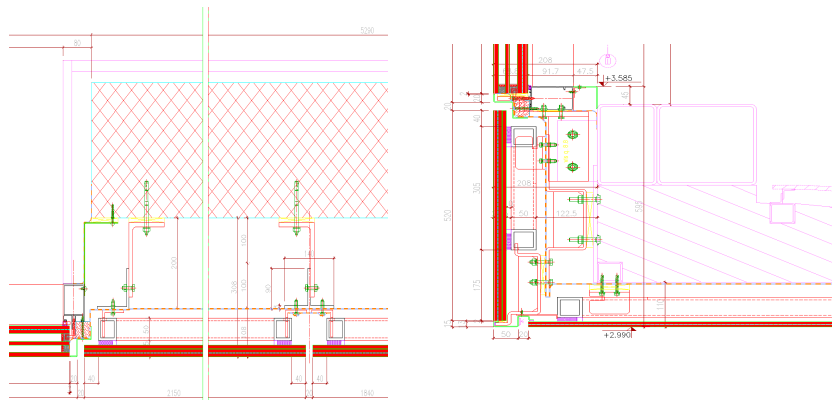
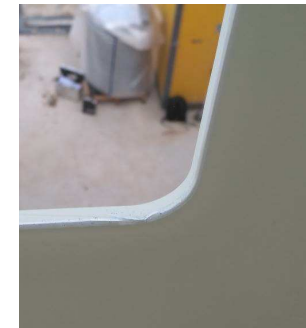
- **Architect's design intent**
- **Continuous façade**
 - Necessity of panels minimum 2000mm wide x 7000mm high.
- **Color & texture**
 - After firsts meetings selection of white color.
 - No guidance about texture.
- **Translucently**
 - Required for incorporating retro lighting



Material references

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- **Technical aspects**
 - **Sub-structure**
 - Mineral wool insulation and aluminium or stainless steel sub-structure.
 - Design for minimise visual impact
 - **Frame**
 - Structural silicon EOTA
 - Horizontal cladding, ceilings
 - Important thermal expansion
 - **Glass composition**
 - Laminated low iron heat strengthened glass,
 - RAL 9010 fritting
 - **Glass calculations**
 - Different areas & different LCs
 - **Movements**
 - 12m span carbon fiber beam
 - **Glass pockets**
 - Transparent areas in the middle of the pane
 - **Other technical issues**
 - Architects design intent



• **PROTOTYPE**

- Different glass compositions, proposal of White PVB
- Evaluation of real colour and transparency
- Approval of client for the whitest aspect with the PVB
- Necessity of working with triple laminated
- Reengineering

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• Conclusions

• Communication

- Client
- Architect
- Project constrains



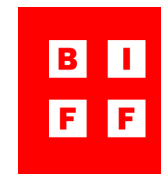
• Concept development

- Research appropriate materials
- Engineering of façade concept
- Market constrains



• Execution phase

- Adaptation to façade company
- Necessity of prototype
- All worked as engineered and expected



Thank you !