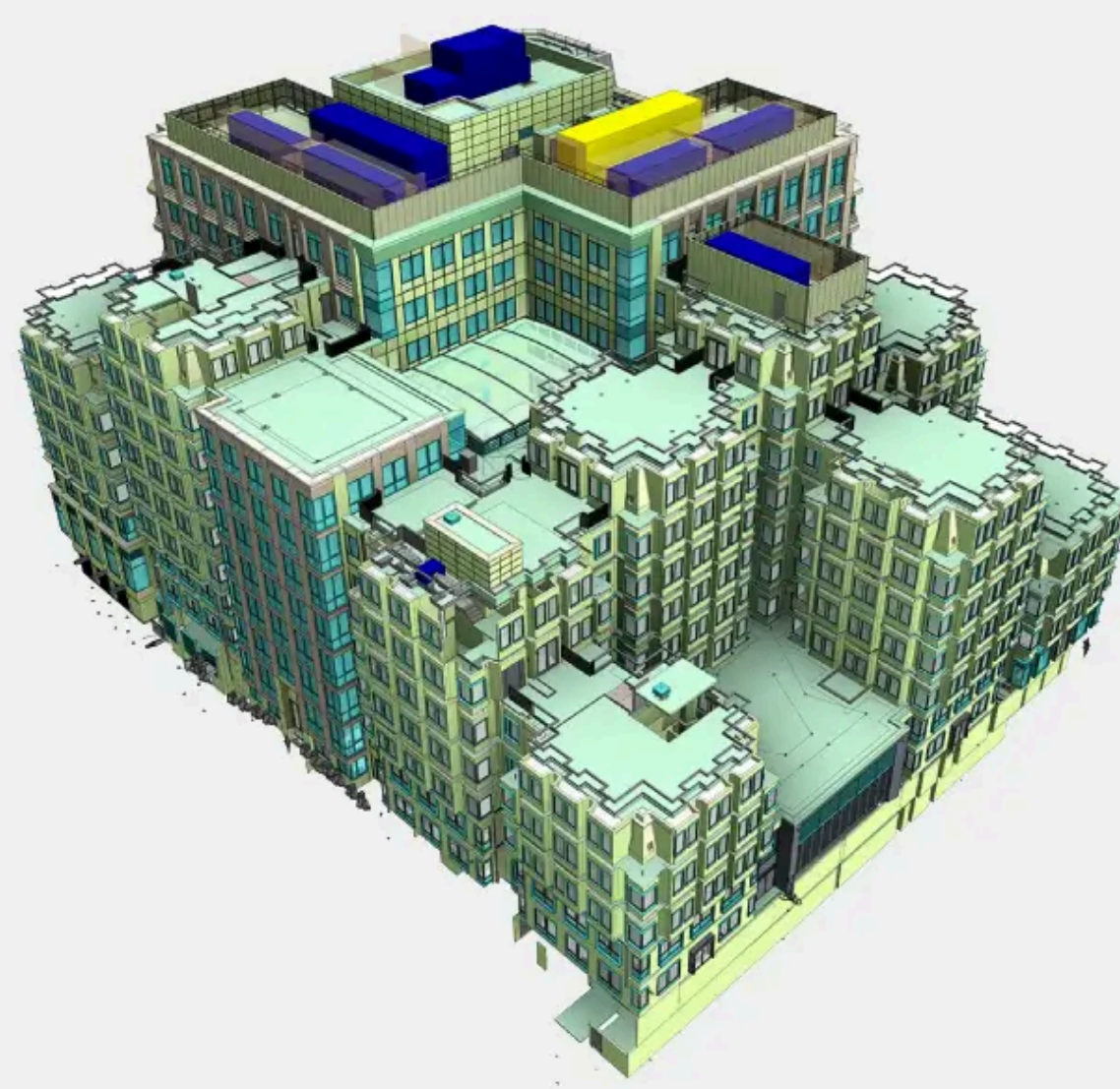


# REVIT Modeling to Simulate Waterproof Roof Design for a Commercial Building



## Project Details

**Project Name**  
Revit Modeling to Simulate Waterproof Roof Design

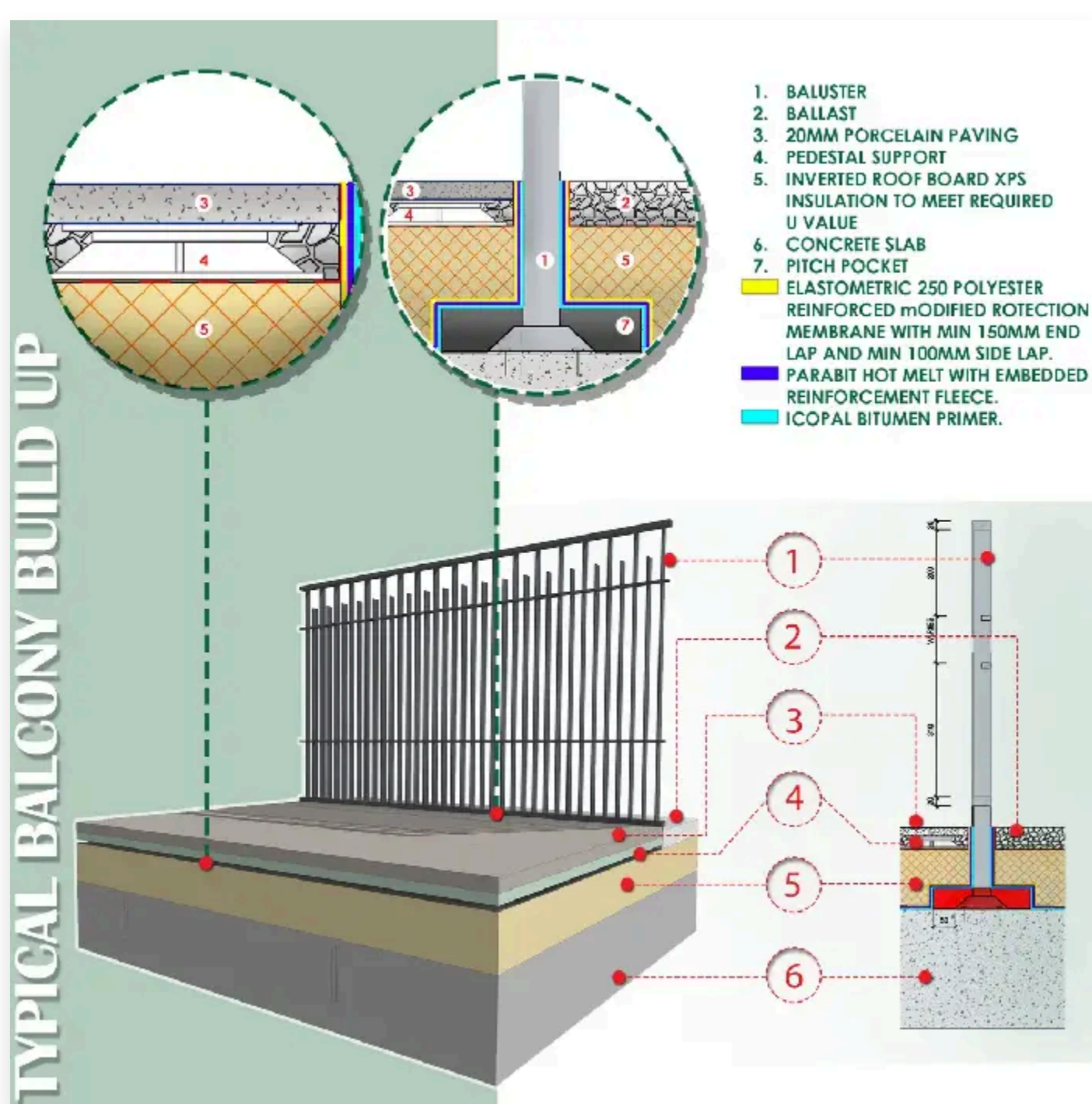
**Project Type**  
BIM Modeling & Detail Simulation

**Type of Building**  
Commercial Building

**Software**  
Autodesk Revit

## Project Overview

This project focused on **developing a Revit-based BIM model** to simulate and visualize a complex waterproof roof system for a commercial building. The primary objective was to clearly represent roof build-ups, waterproofing layers, insulation systems, and drainage details through accurate 3D modeling and technical detailing. The model served as a reference for understanding constructability, material sequencing, and system integration within the roof design.



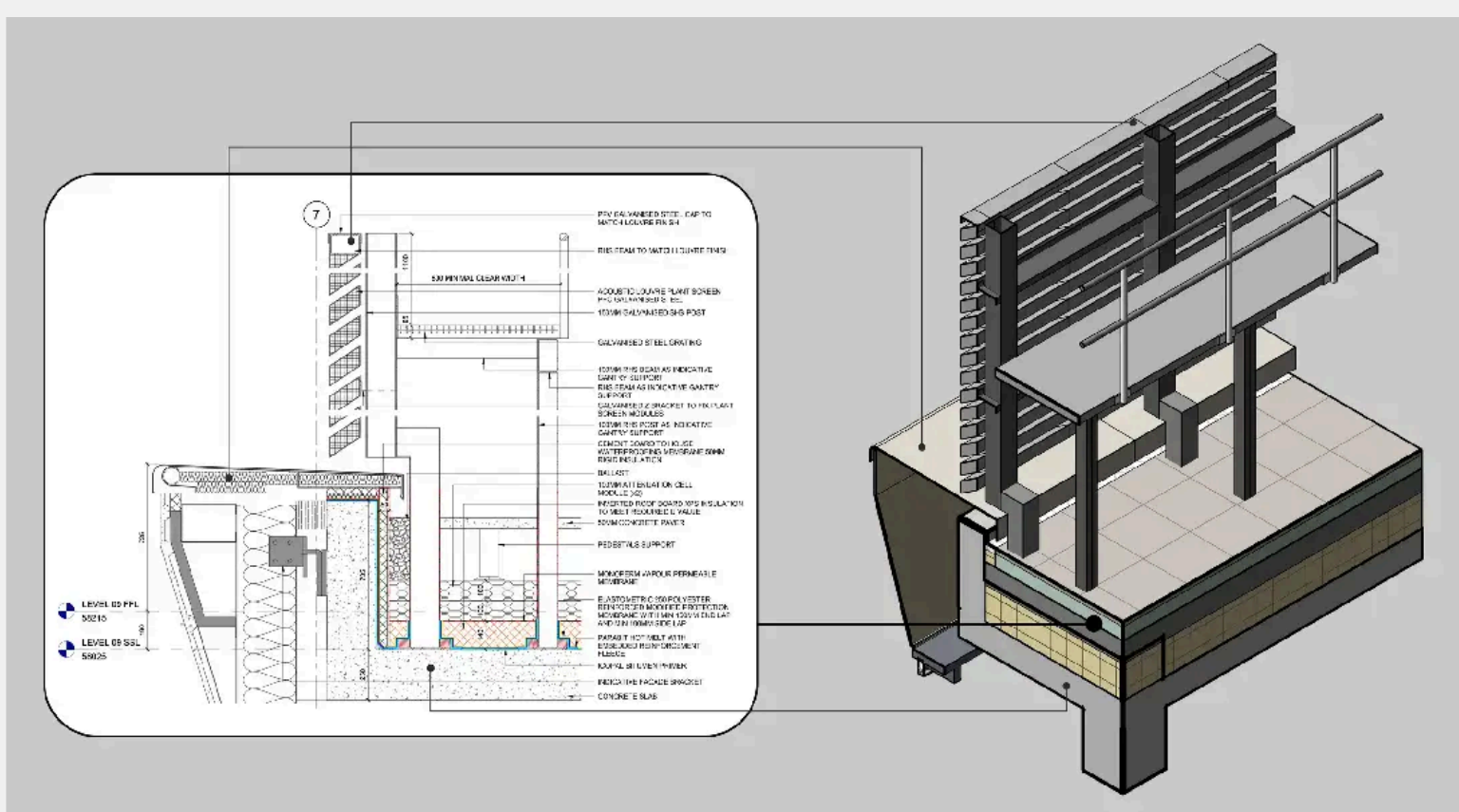
## Client Requirement

The client required a clear and **coordinated visualization** of the roof waterproofing system to validate design intent and material composition. The focus was on demonstrating multiple roof conditions, including balconies, inverted roofs, and bio-solar roof systems, using detailed sections and annotated 3D views for clarity.

## Scope of Work

Tesla Outsourcing Services developed detailed Revit models representing roof assemblies and waterproofing systems. The scope included modeling roof layers such as concrete slabs, insulation boards, membranes, protection layers, paving systems, and drainage components. Enlarged construction details, sectional views, and 3D visualizations were created to clearly communicate system build-ups and junction conditions.

## Project Highlights



➤ Revit-based roof system simulation and detailing

➤ Detailed representation of waterproofing layers and insulation build-ups

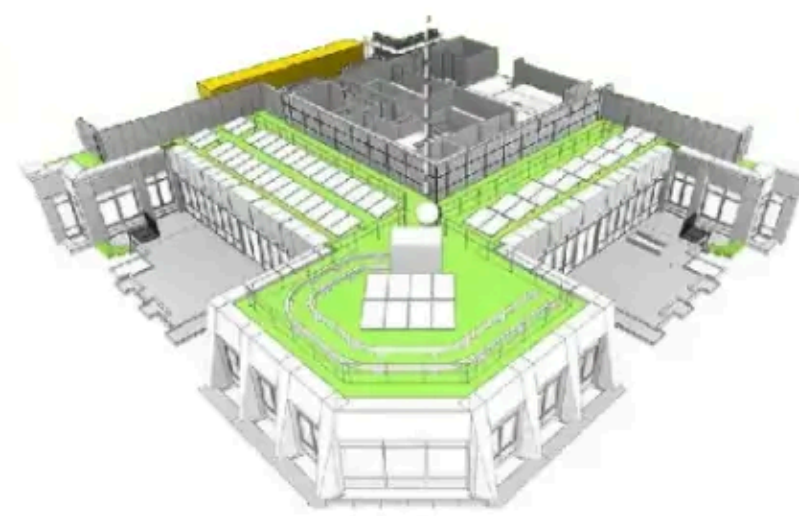
➤ 3D views integrated with annotated sectional details

➤ Visualization of balcony waterproofing and roof junctions

➤ Clear depiction of bio-solar and inverted roof systems

## The Outcome

The final BIM output provided a comprehensive understanding of the waterproof roof design, enabling clear communication of construction methodology and material sequencing. The visual and technical clarity achieved through the Revit model supported design validation and reduced ambiguity in roof construction detailing.



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| Belgium    | Portugal    | • Colorado      | • New Jersey   |
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| France     | Sweden      | • Florida       | • Oregon       |
| Germany    | Switzerland | • Georgia       | • Pennsylvania |
| Ireland    | UK          | • Illinois      | • Tennessee    |
| Italy      | Canada      | • Louisiana     | • Texas        |
| Netherland | Mexico      | • Massachusetts | • Utah         |