

# Quick Guide



CLASH  
DETECTION



## Overview

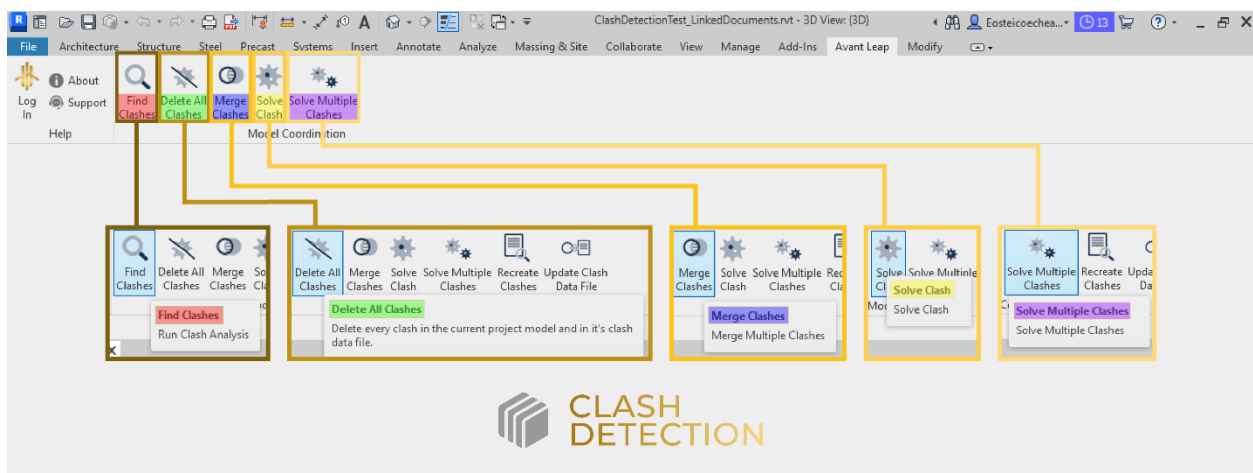
- Detect and Record Clashes: Automatically detects clashes and records detailed information in a data file.
- Clash Identification Family: Places a visual marker in the clash location for easy identification.
- Solve and Communicate Solutions: Mark clashes as "solved" with a simple command, changing their visual representation in the model.
- Comprehensive Database: Stores clash data in a .json file for each project, aiding in coordination and future tool development.
- Support for Linked Documents: Works with standalone and linked documents, analyzing all elements within the active Revit document.

## Installation Guide

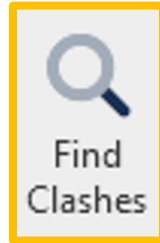
Execute our installer to add the Avant Leap Clash Detection tools to your system. This includes:

- A dedicated Revit AvantLeap Ribbon Tab with seven clash detection buttons.
- An AvantLeap folder in your MyDocuments for data storage.
- A project-specific clashes database located in MyDocuments\AvantLeap\Tools\ClashDetection.
- A versatile Clash Sphere Revit Family for visual clash marking.

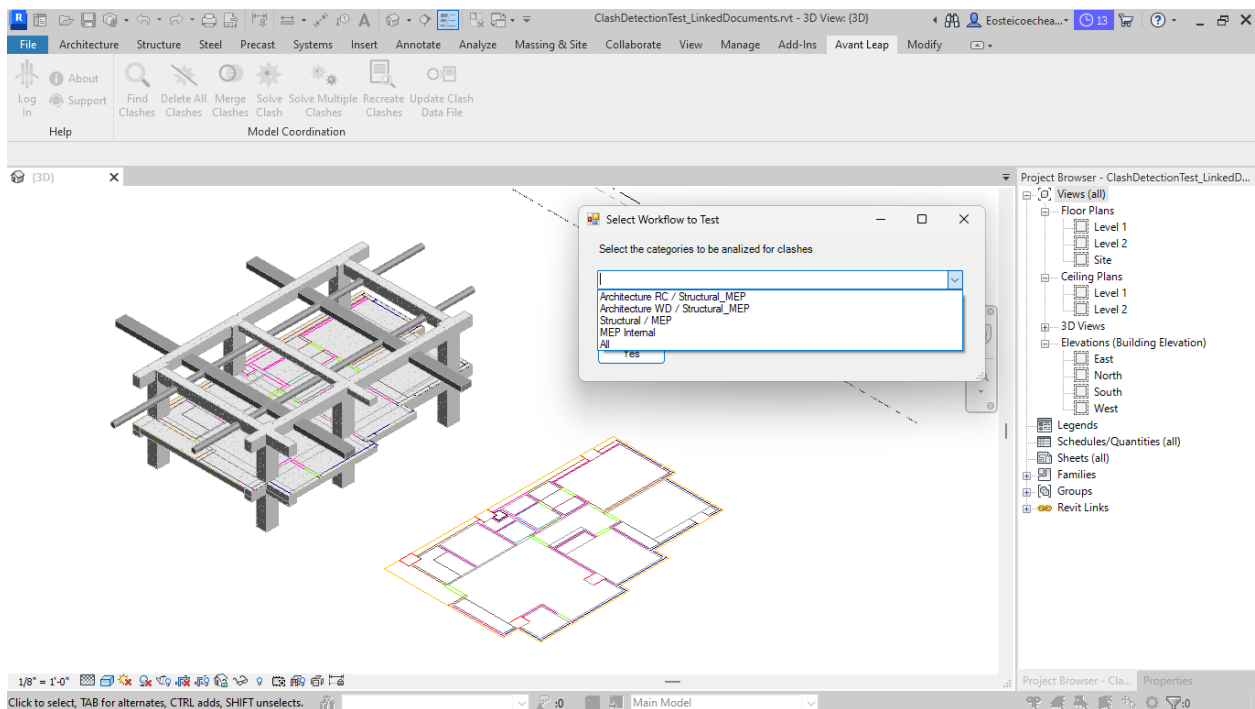
## Functionality



# 1. Find Clashes:

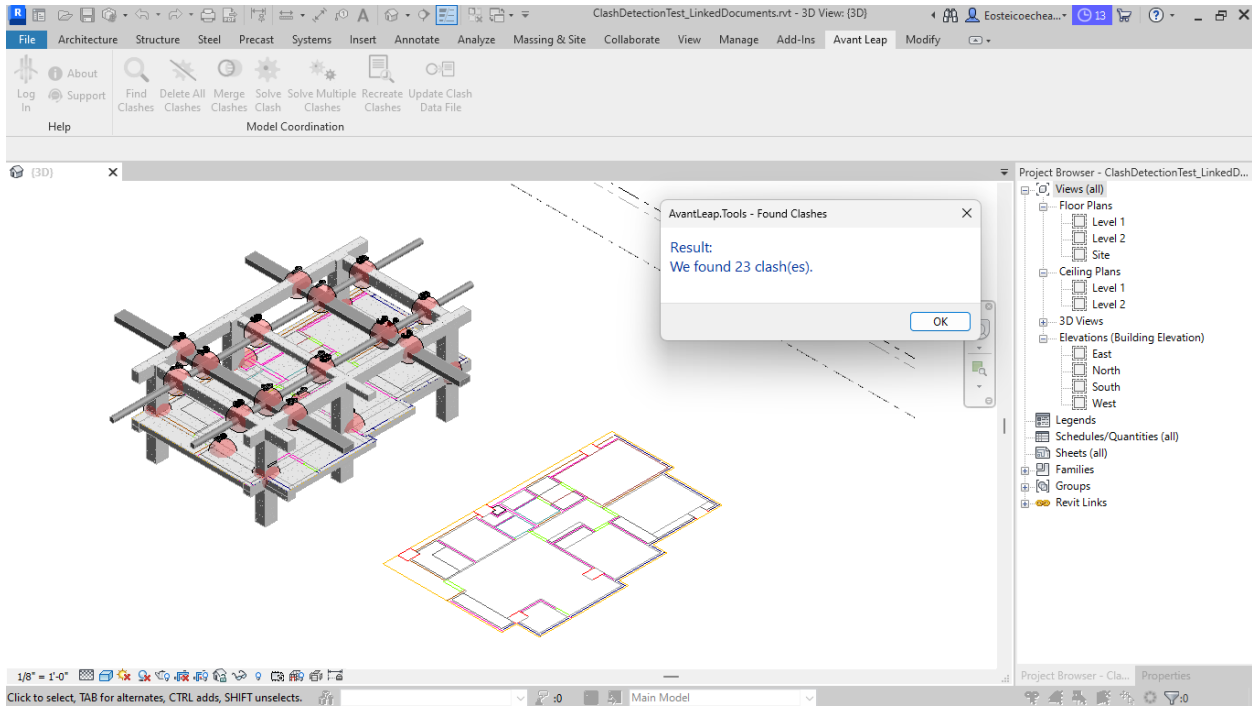


- Purpose: Initiates the clash detection process by analyzing model elements based on the selected workflow.
- How It Works: Upon selection, users are prompted to choose a clash detection workflow. The tool then scans the model (including linked documents) for any clashes among structural, MEP, and architectural elements.

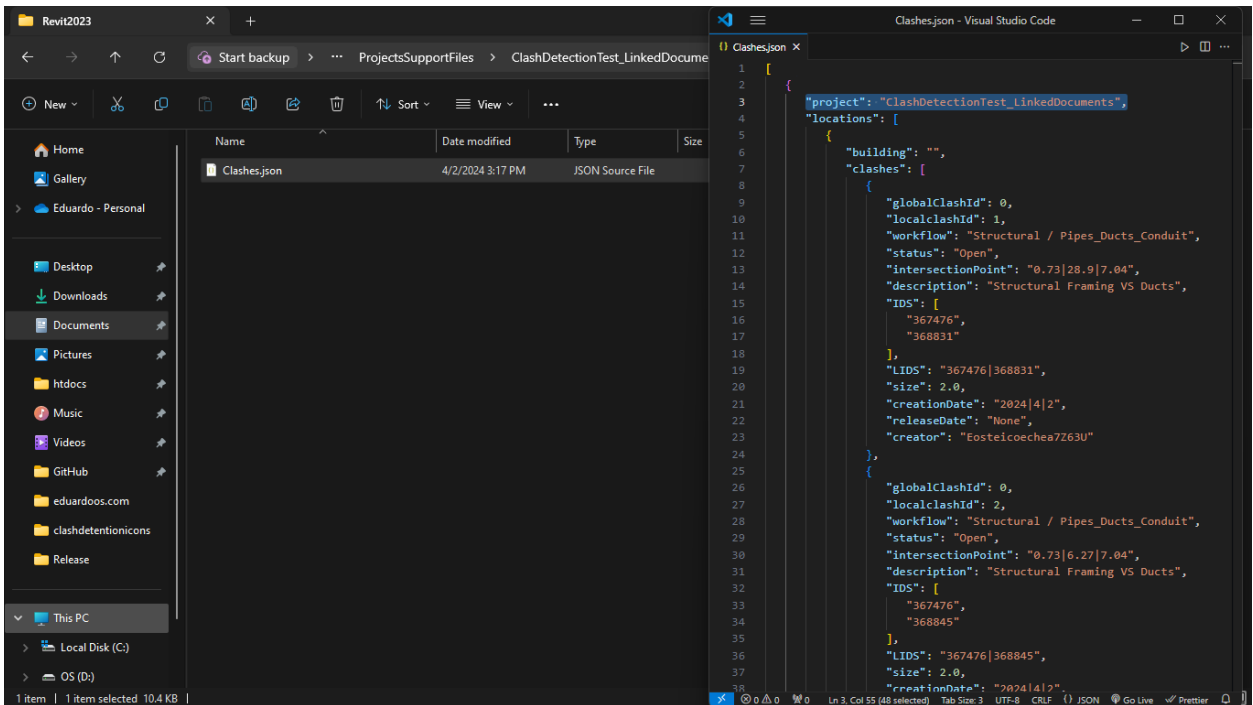


Outcome:

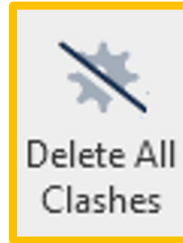
Each detected clash results in a Clash Sphere being placed at the location of the collision within the model, ensuring visibility.



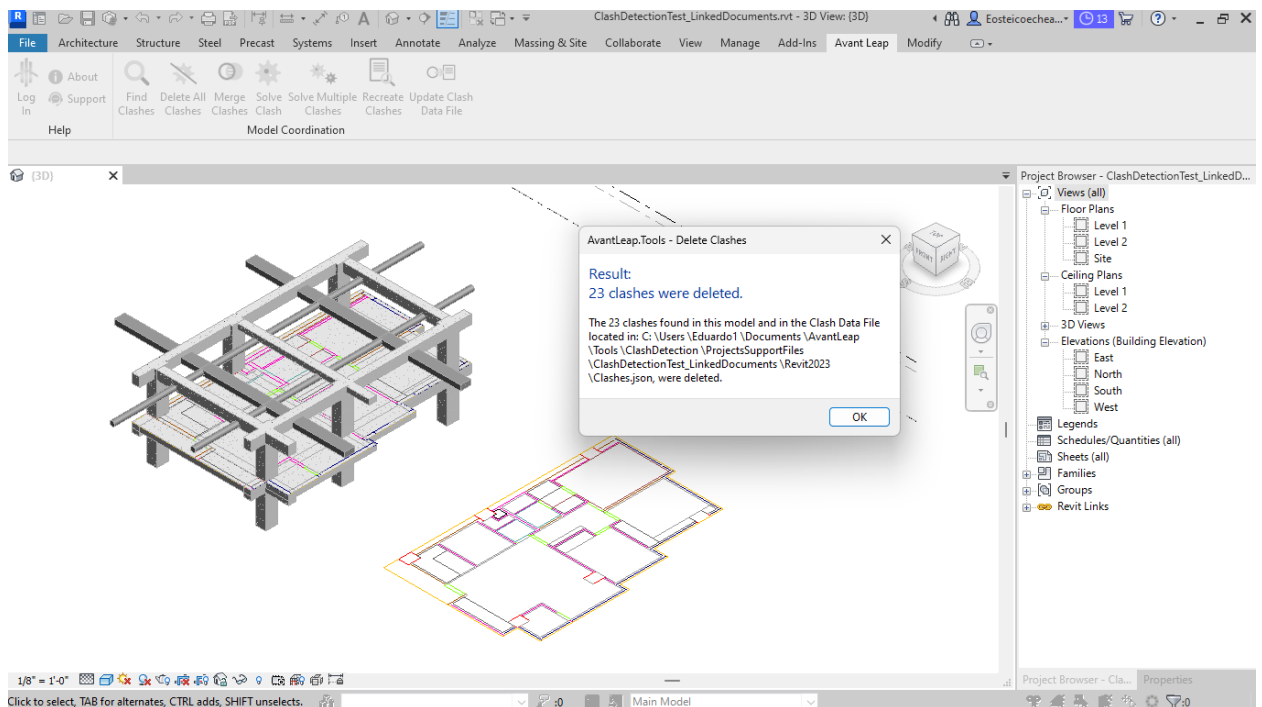
Additionally, detailed clash information is saved in a JSON file for documentation and future reference.



## 2. Delete All Clashes:



- Purpose: Removes all Clash Spheres and their corresponding data from the model and database, offering a clean slate.
- How It Works: With a single command, all visual markers for clashes and their entries in the JSON file are deleted.



```

Clashes.json - Visual Studio Code
1  [
2  {
3    "project": "ClashDetectionTest_LinkedDocuments",
4    "locations": [
5      {
6        "building": "",
7        "clashes": []
8      }
9    ]
10 }
11 ]
    
```

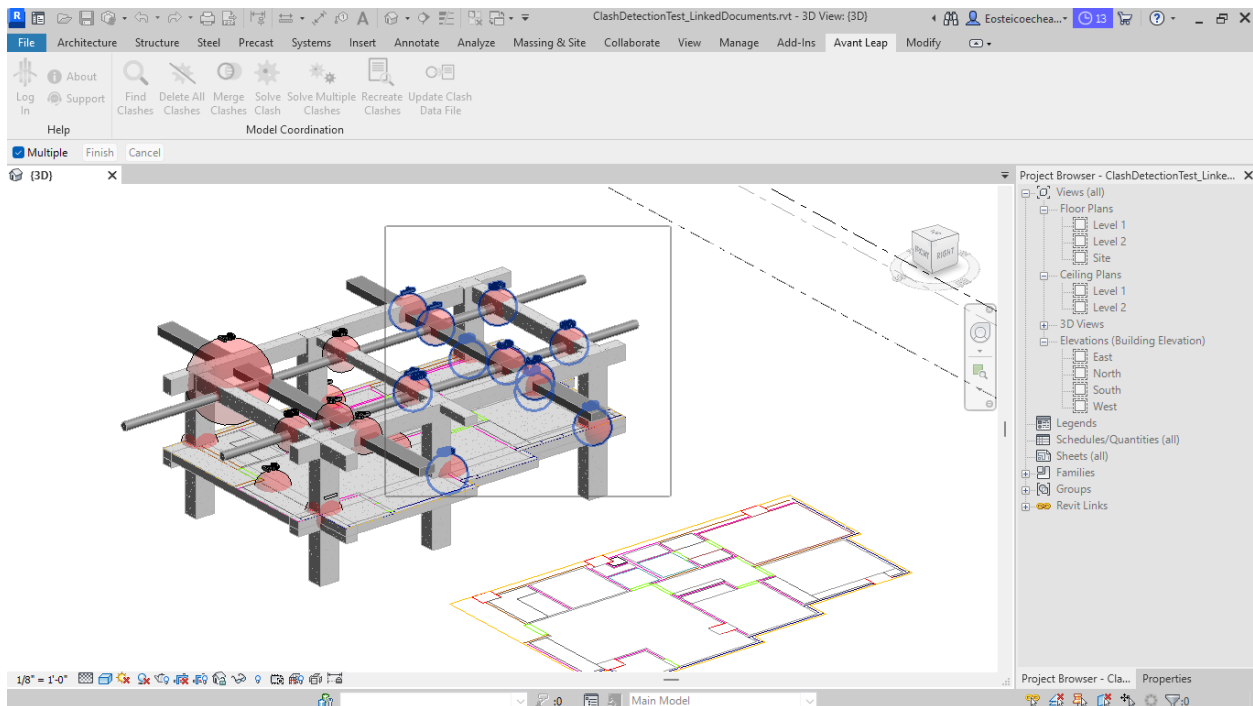
Outcome:

Useful for resetting the clash detection process, especially after major model revisions or when starting a new phase of clash detection.

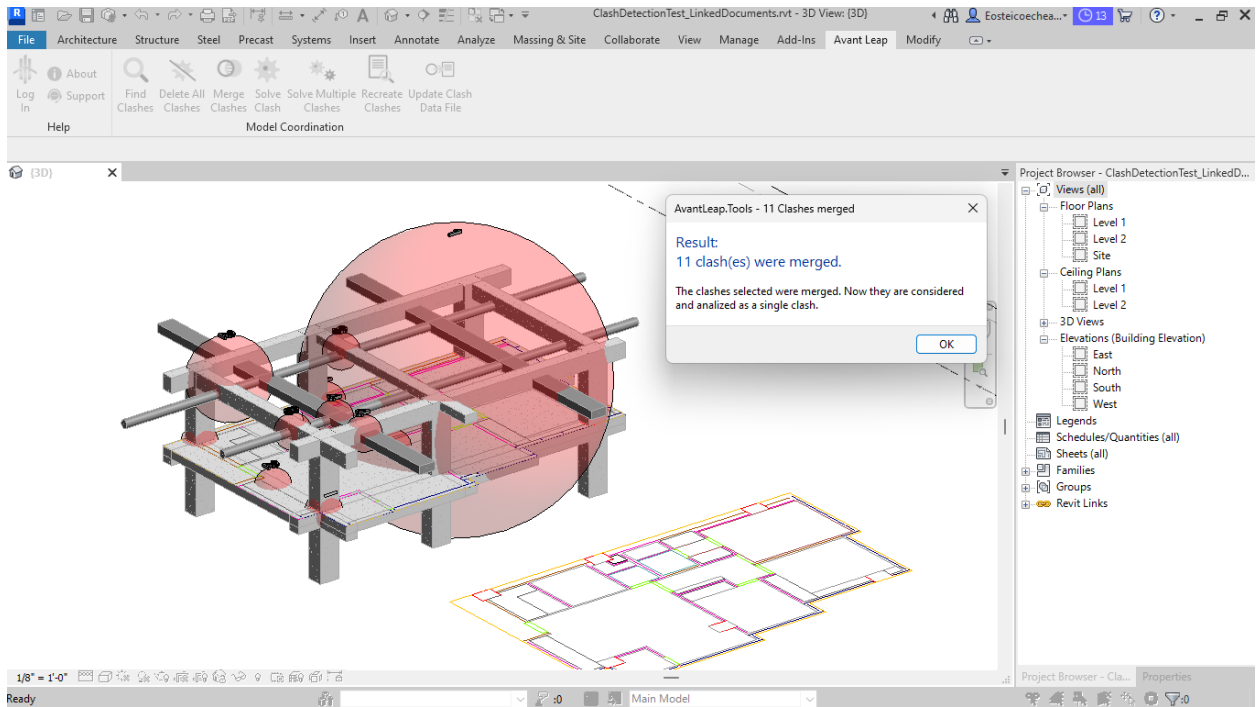
### 3. Merge Clashes:



- Purpose: Streamlines the management of clashes by combining multiple close-proximity clashes into a single, more significant clash.
- How It Works: Users select two or more clashes they wish to merge.



The tool combines these into one larger Clash Sphere, removes the individual markers, and merges their data in the project's clash database.



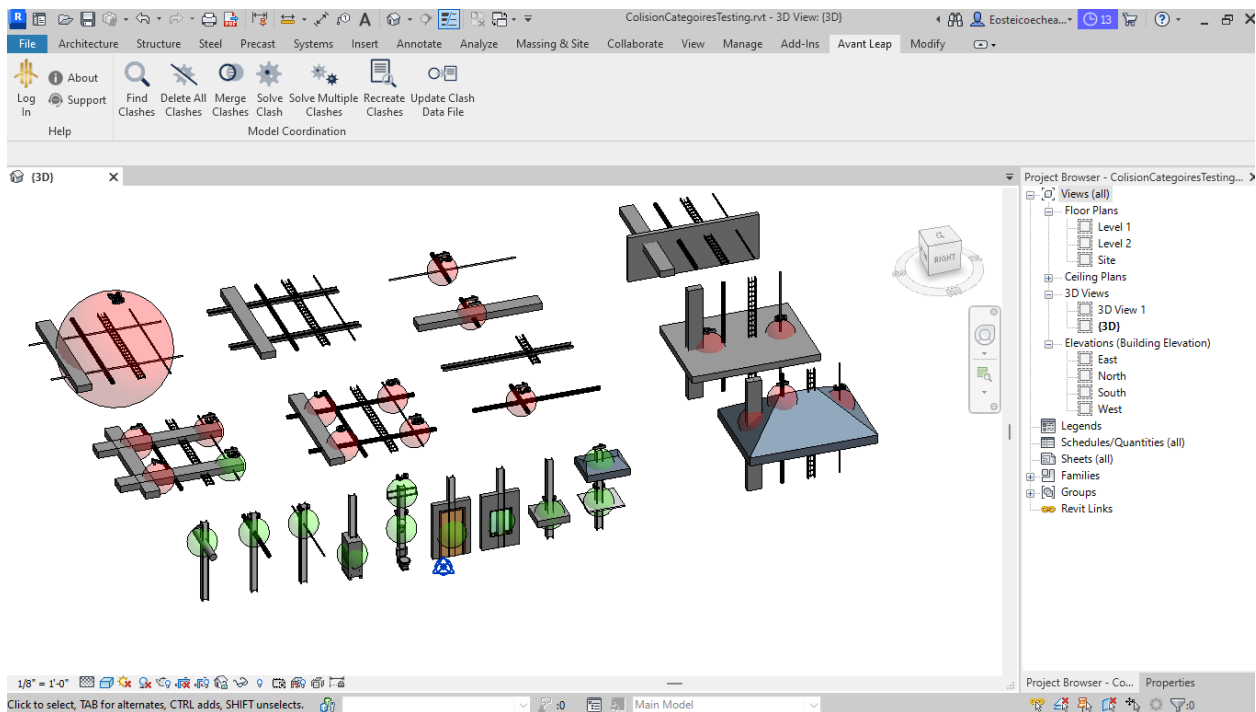
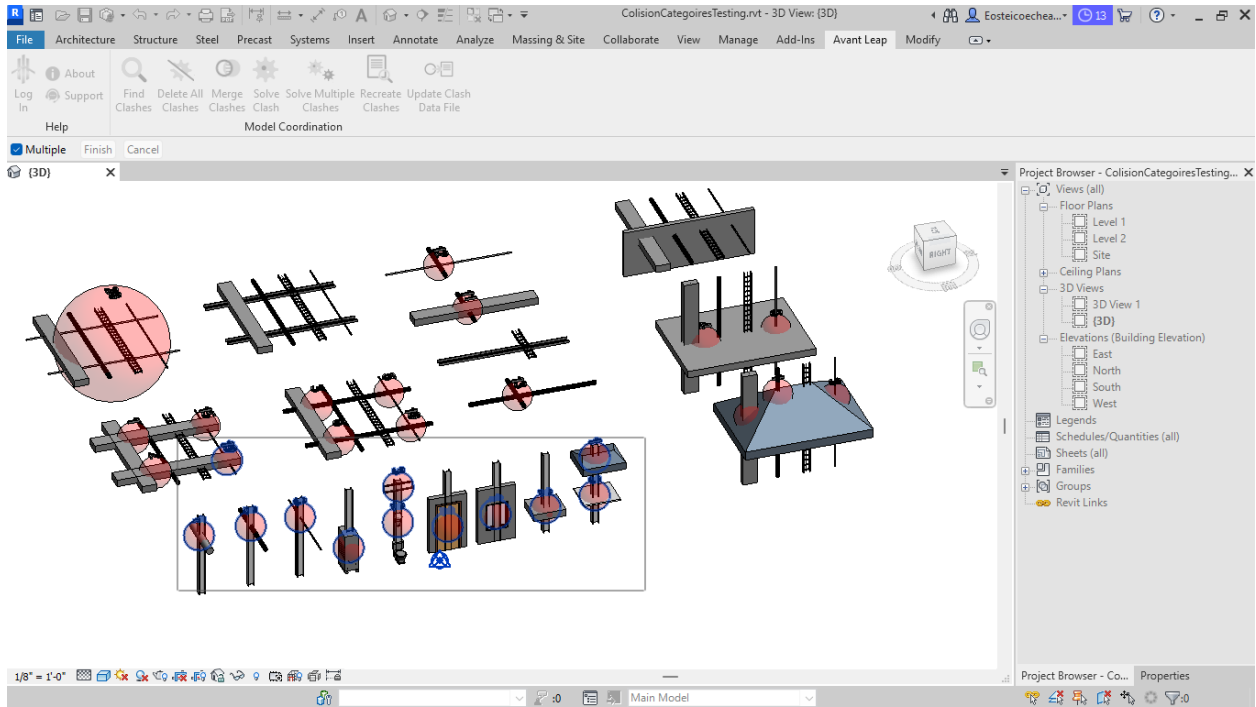
Outcome:

Reduces clutter in the model by minimizing the number of clash markers, making it easier to address and solve larger clash issues.

#### 4. Solve Clash and Solve Multiple Clashes:



- Purpose: Marks a selected clash or multiple clashes as solved, updating its visual representation and status in the database.
- How It Works: When a clash is resolved, selecting this command changes the Clash Sphere's family type and color to indicate resolution, simultaneously updating the clash status in the JSON file.



Outcome:

Provides a clear visual indication of resolved clashes, facilitating progress tracking and communication among project stakeholders.

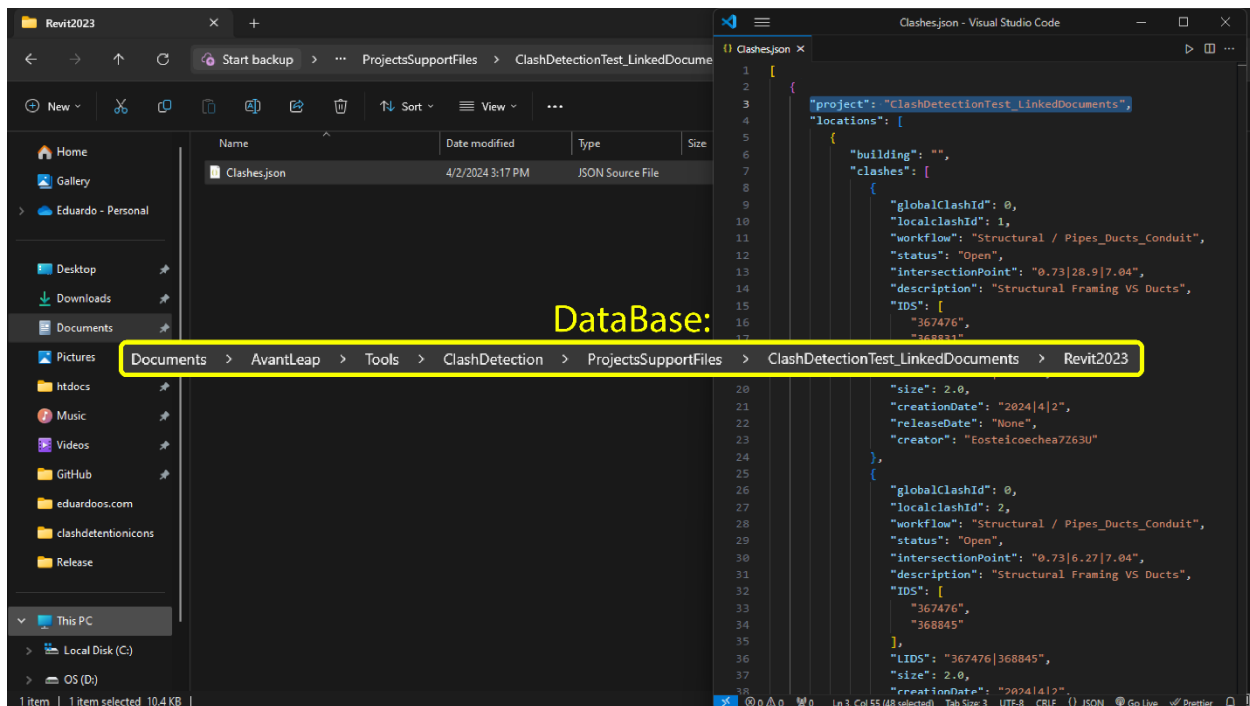


## Database file location

The Avant Leap Clash Detection tool's database, stored at:

### MyDocuments\AvantLeap\Tools\ClashDetection

is key for team collaboration and tool improvement. It organizes clash details in .json files for easy access and resolution, and aids in analyzing clash patterns for better project planning. This setup significantly enhances project management and tool efficiency.



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