THE CONSTRUCTION INDUSTRY

CIVIL DRAWINGS

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Engineering Graphics and Design
Free State Province

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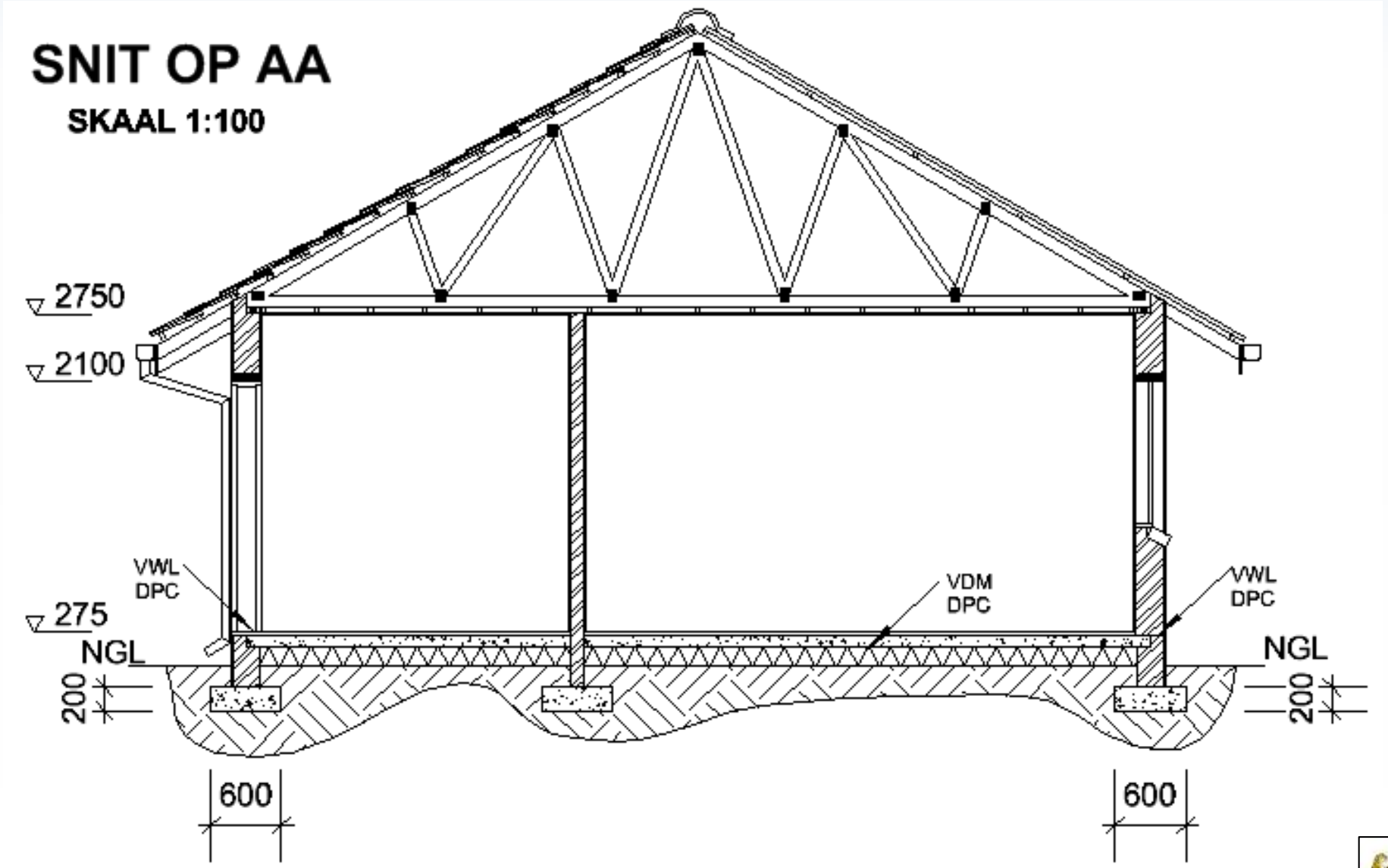
A SECTIONAL VIEW (Grade 12 level)



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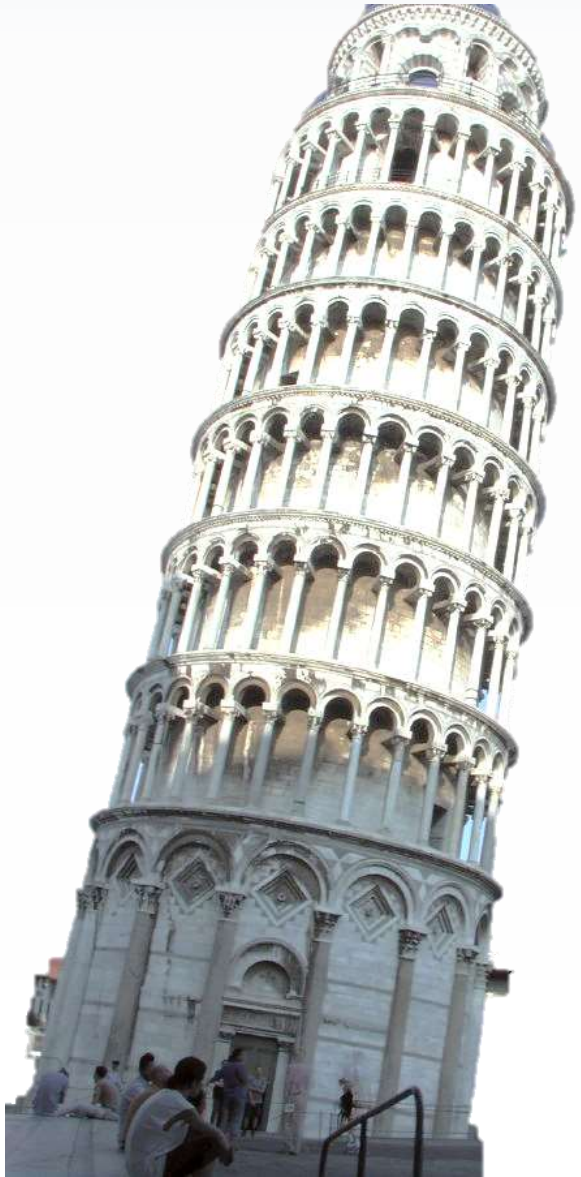
FOUNDATIONS (Grade 10, 11 & 12)

- The foundation is the most important part of any building.
- Foundations must be in solid ground.
- Foundations are influenced by the soil structure (sandy, clay & rock).

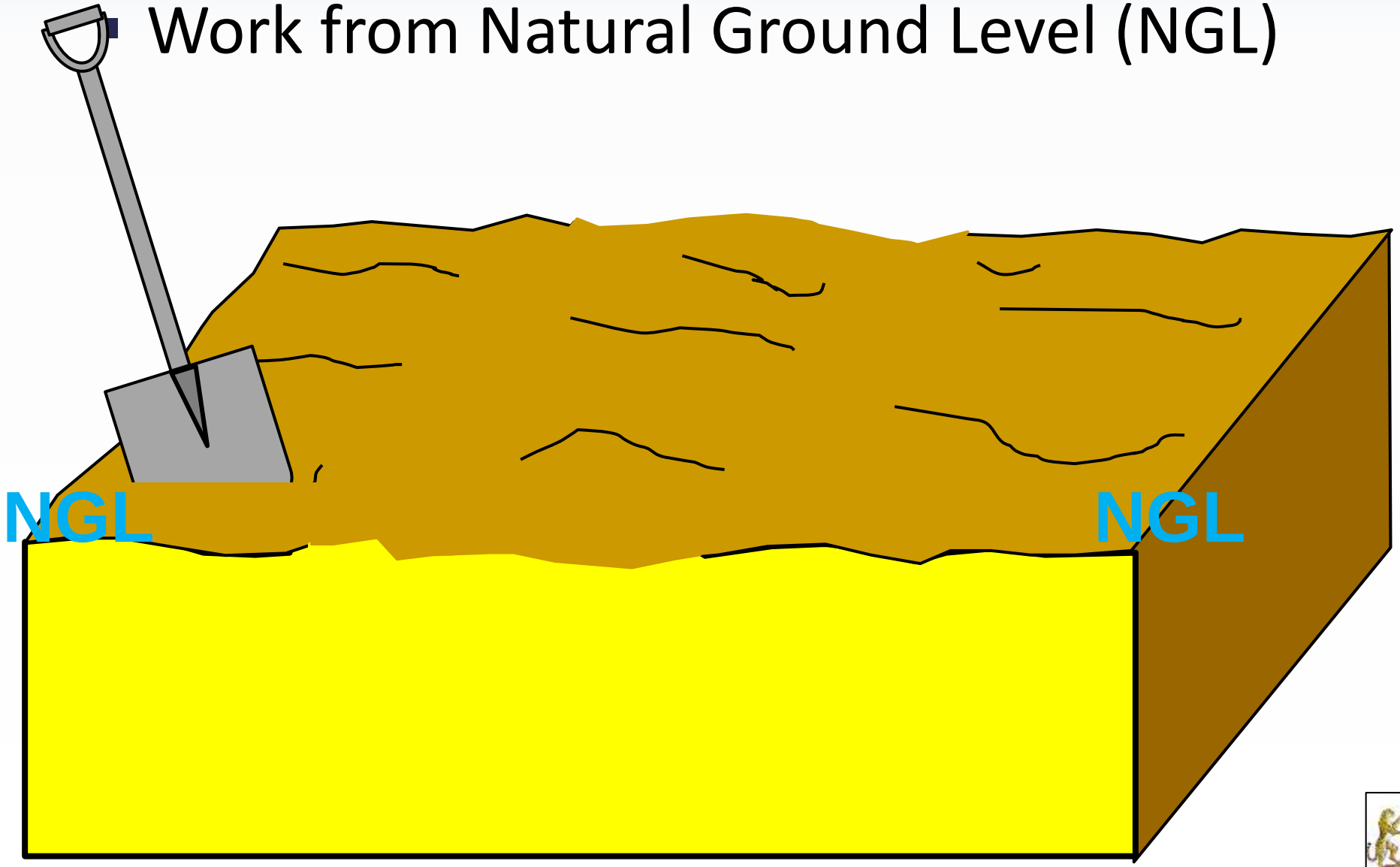
WHY FOUNDATIONS?



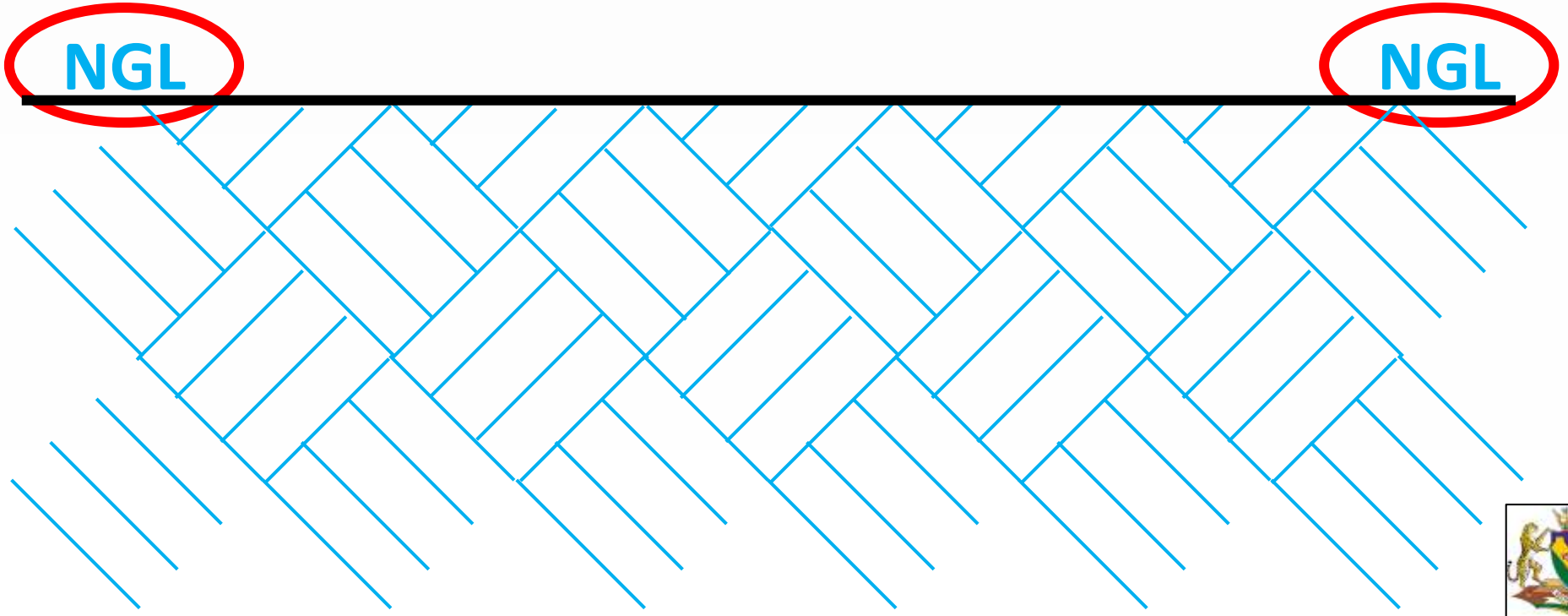
- Walls are very heavy
- Walls are standing on soft soil.
- Without foundations the weight of the building is not spread evenly

FOUNDATIONS

- Work from Natural Ground Level (NGL)



NATURAL GROUND LEVEL (NGL)

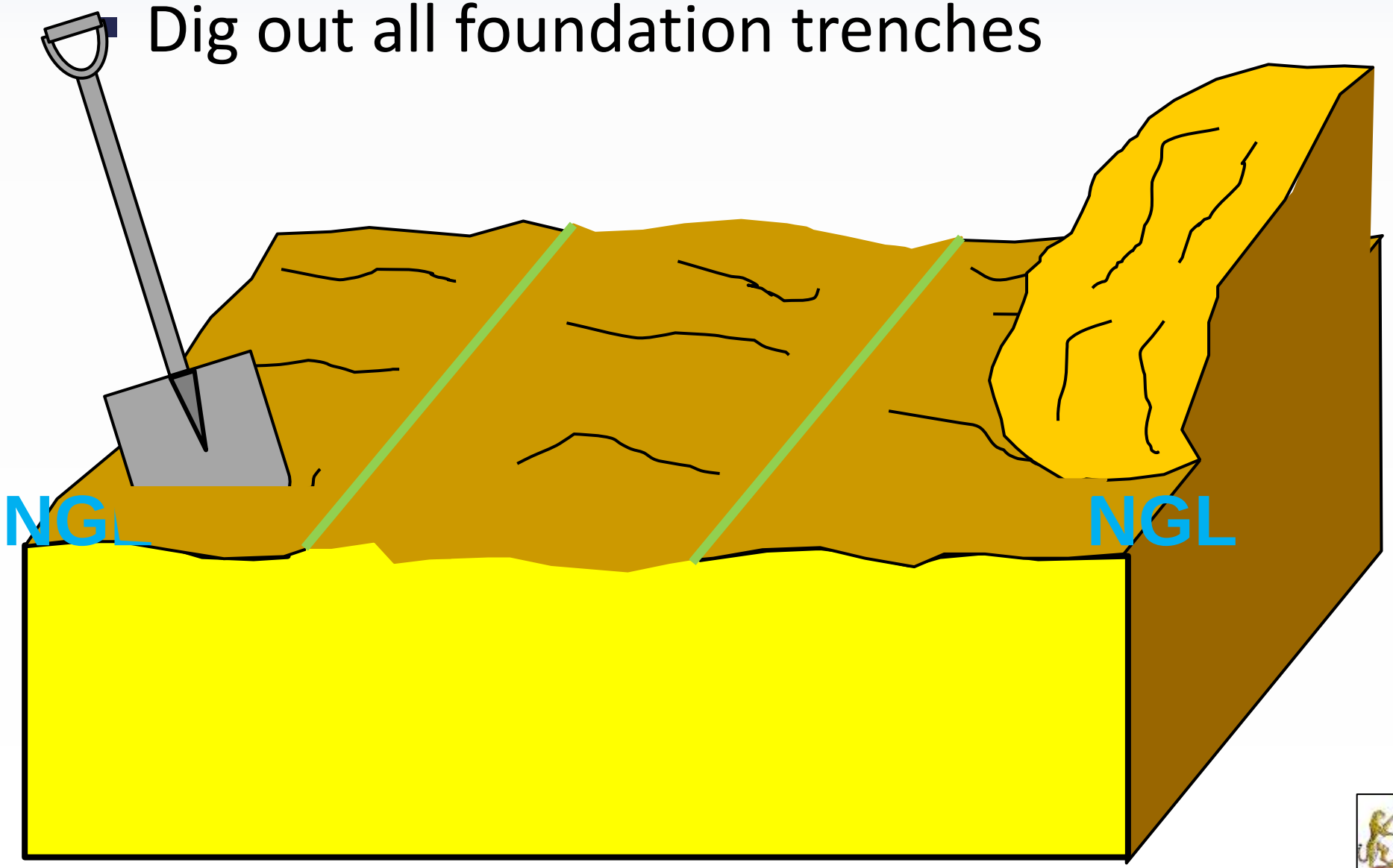


FOUNDATIONS

- Plot and measure the foundation area exactly according to the specifications

FOUNDATIONS

- Dig out all foundation trenches



FOUNDATIONS

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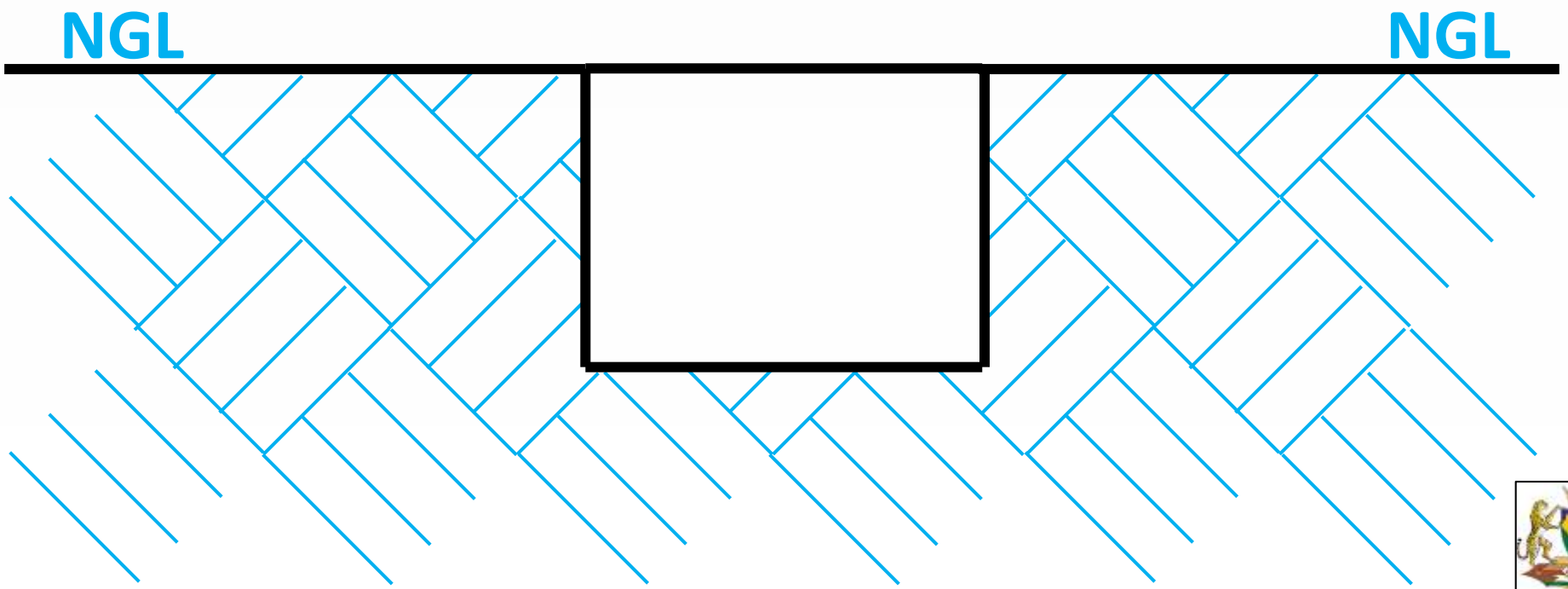
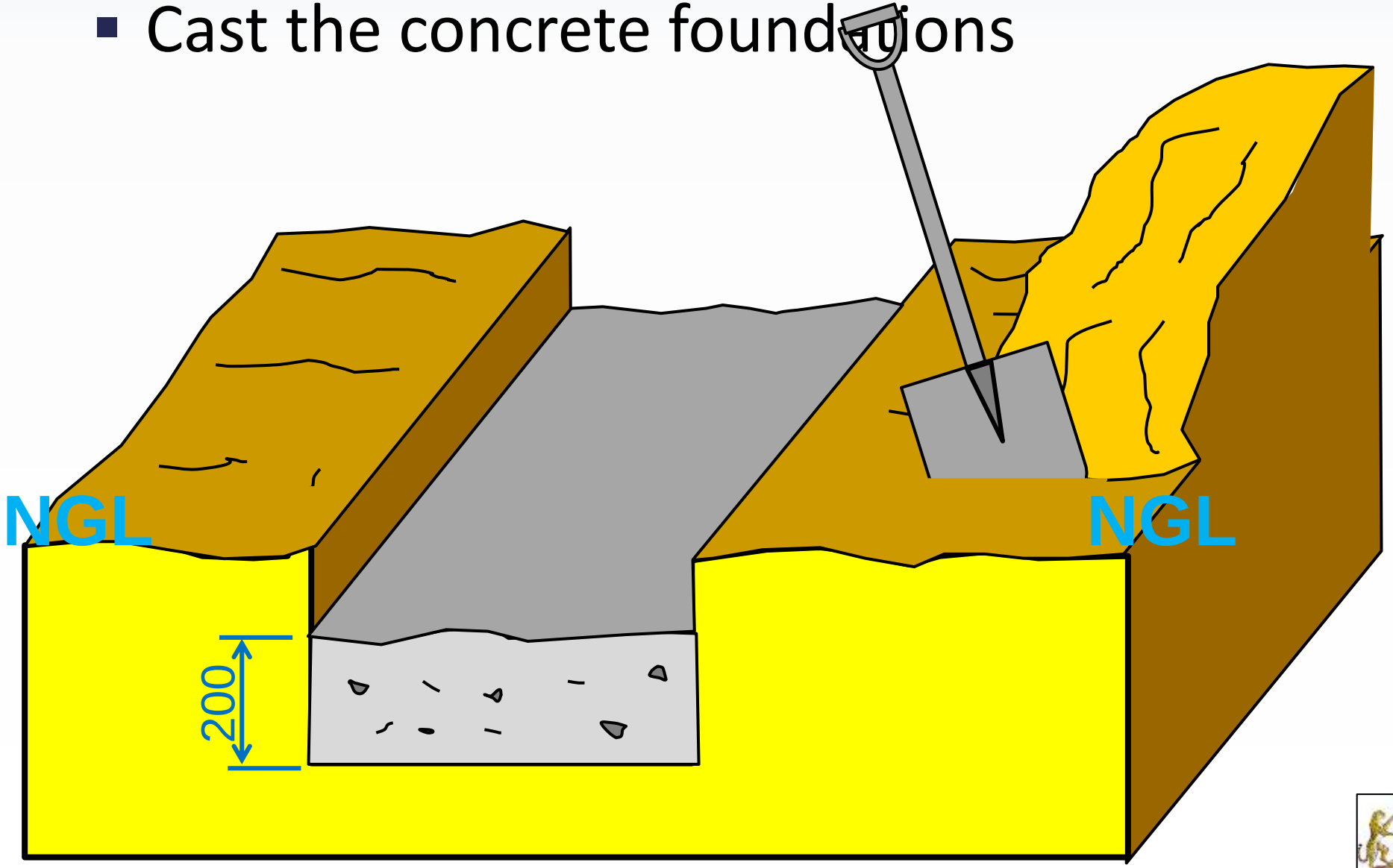
FOUNDATION TRENCHES



FOUNDATIONS

- Cast the concrete foundations



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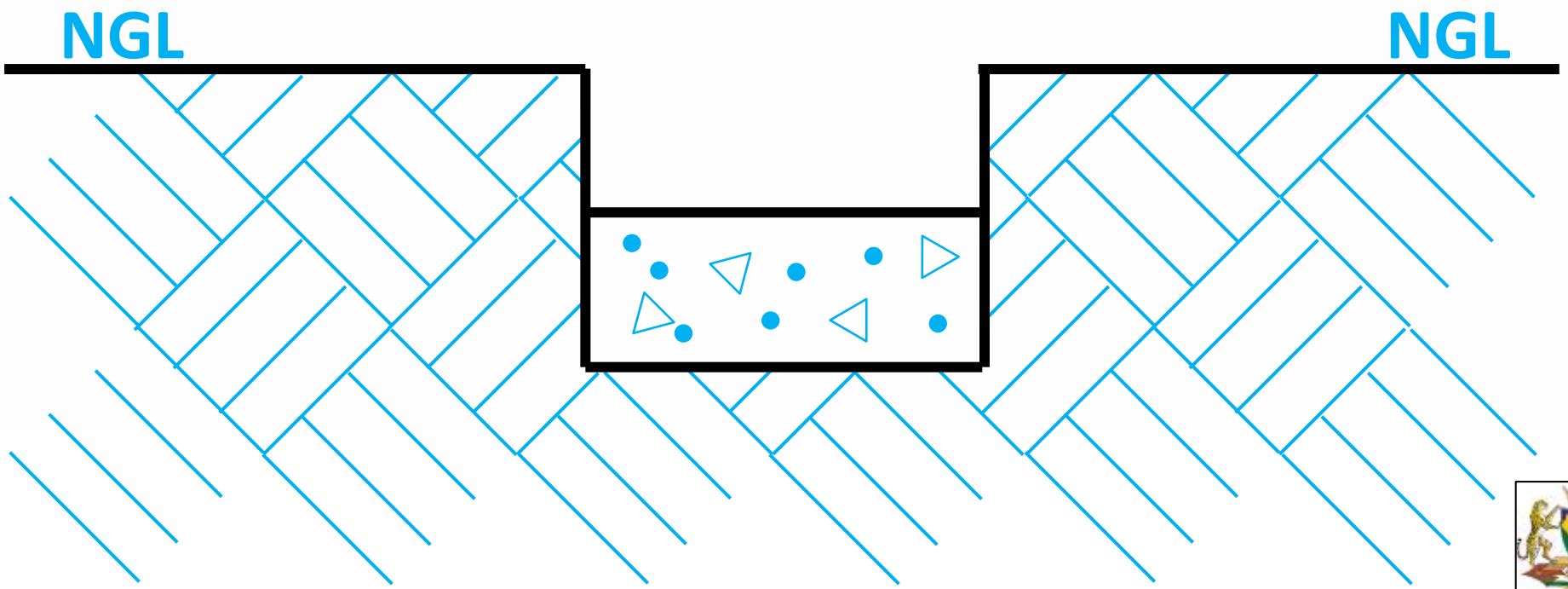
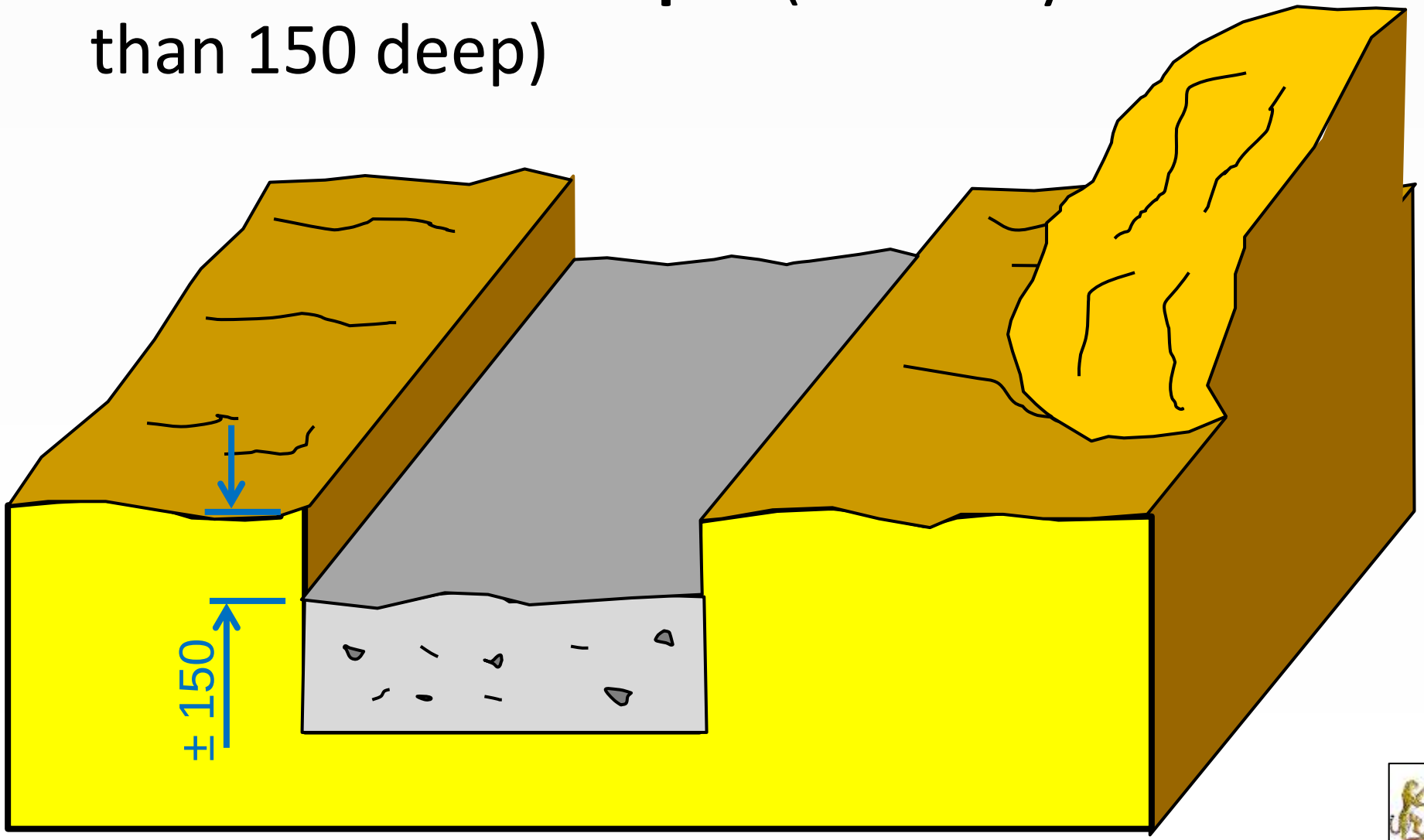
FOUNDATION TRENCHES FILLED WITH CONCRETE



FOUNDATION DIMENSIONS

- **The foundation depth** (normally not less than 150 deep)



FOUNDATION DEPTH

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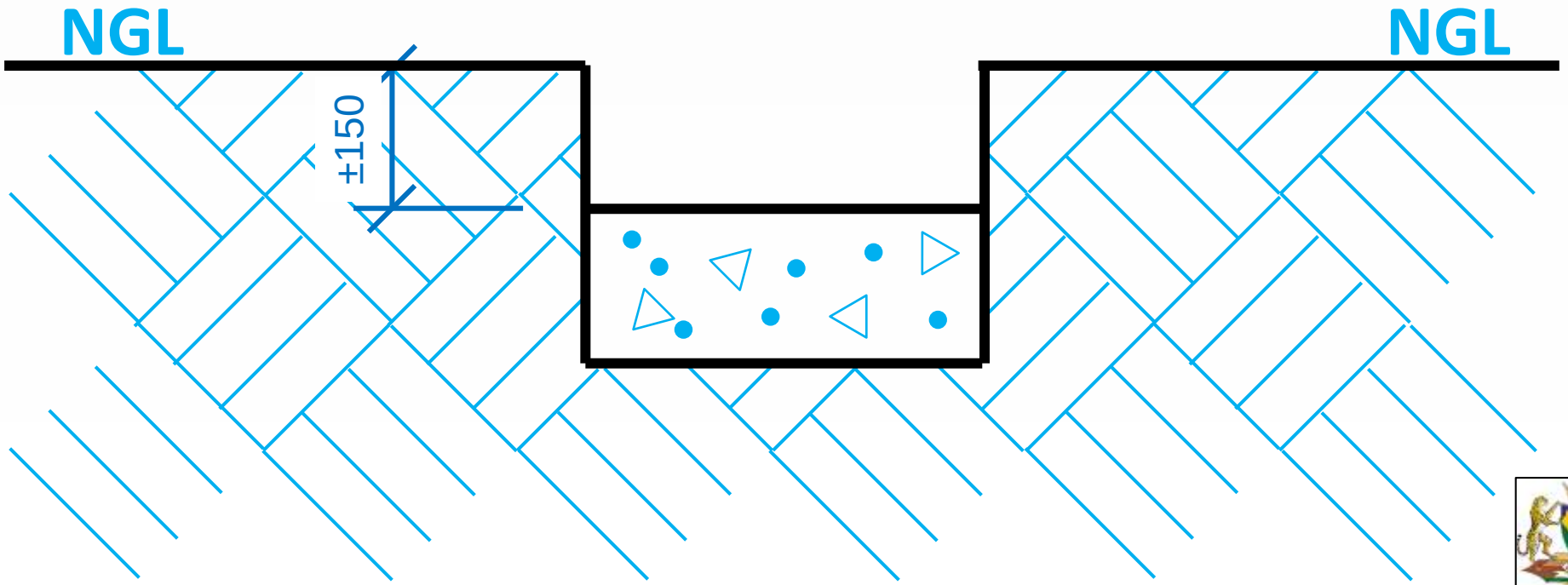
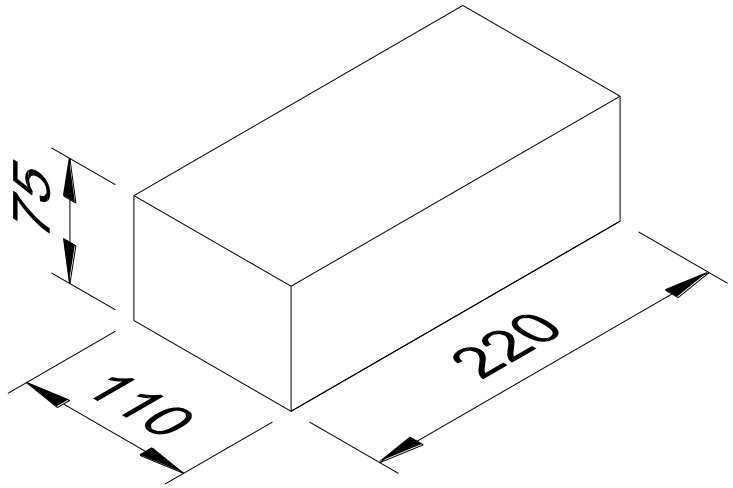
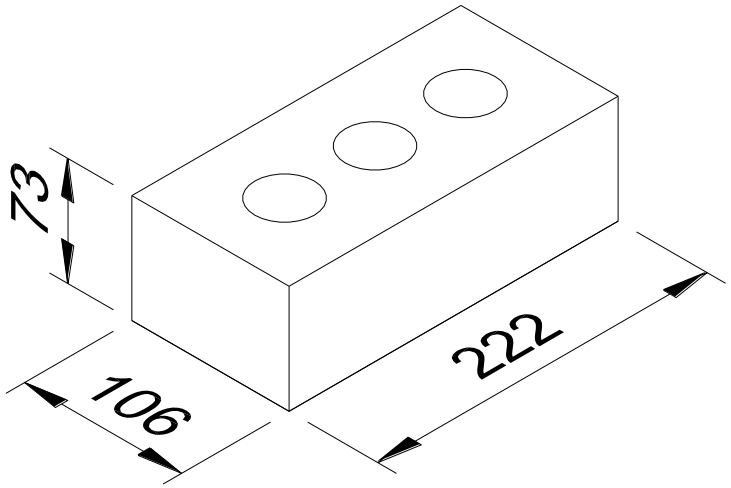


BRICK SIZE

DRAWING SIZE

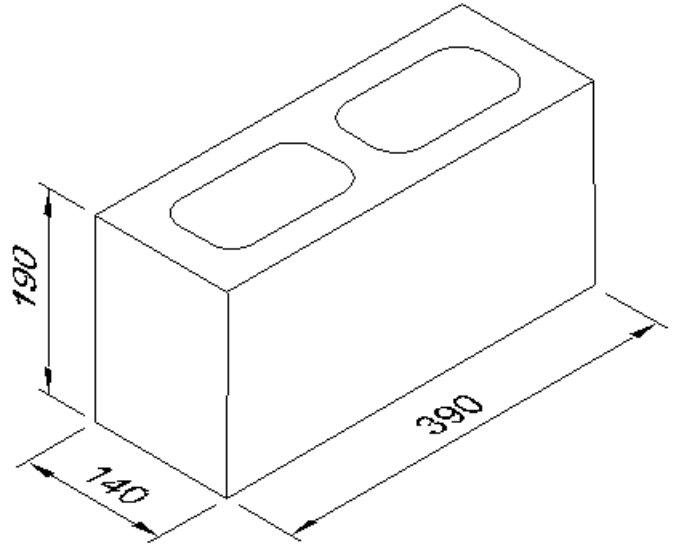


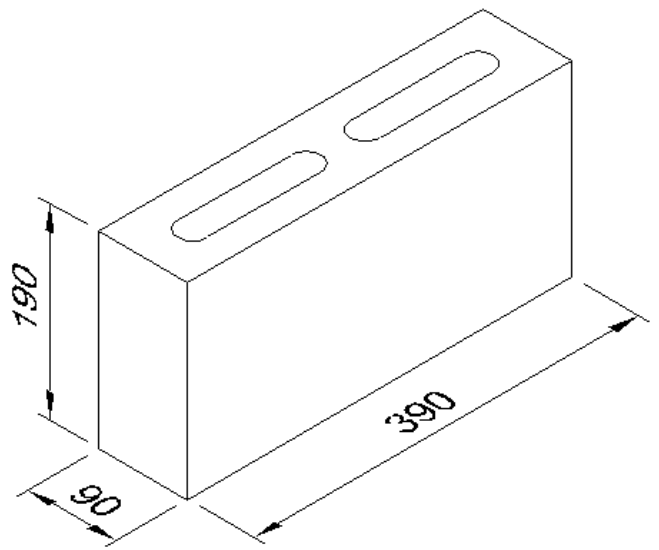
TRUE SIZE

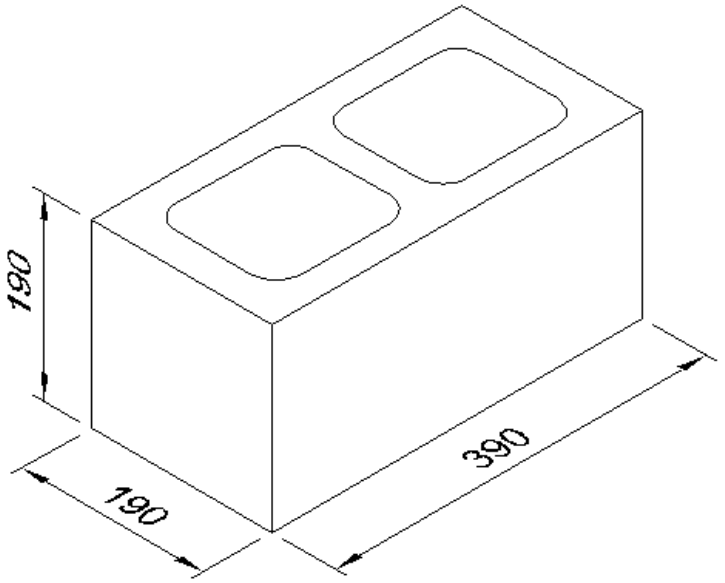


STANDARD SIZES FOR STOCK AND CLAY BRICK

BLOCK SIZES







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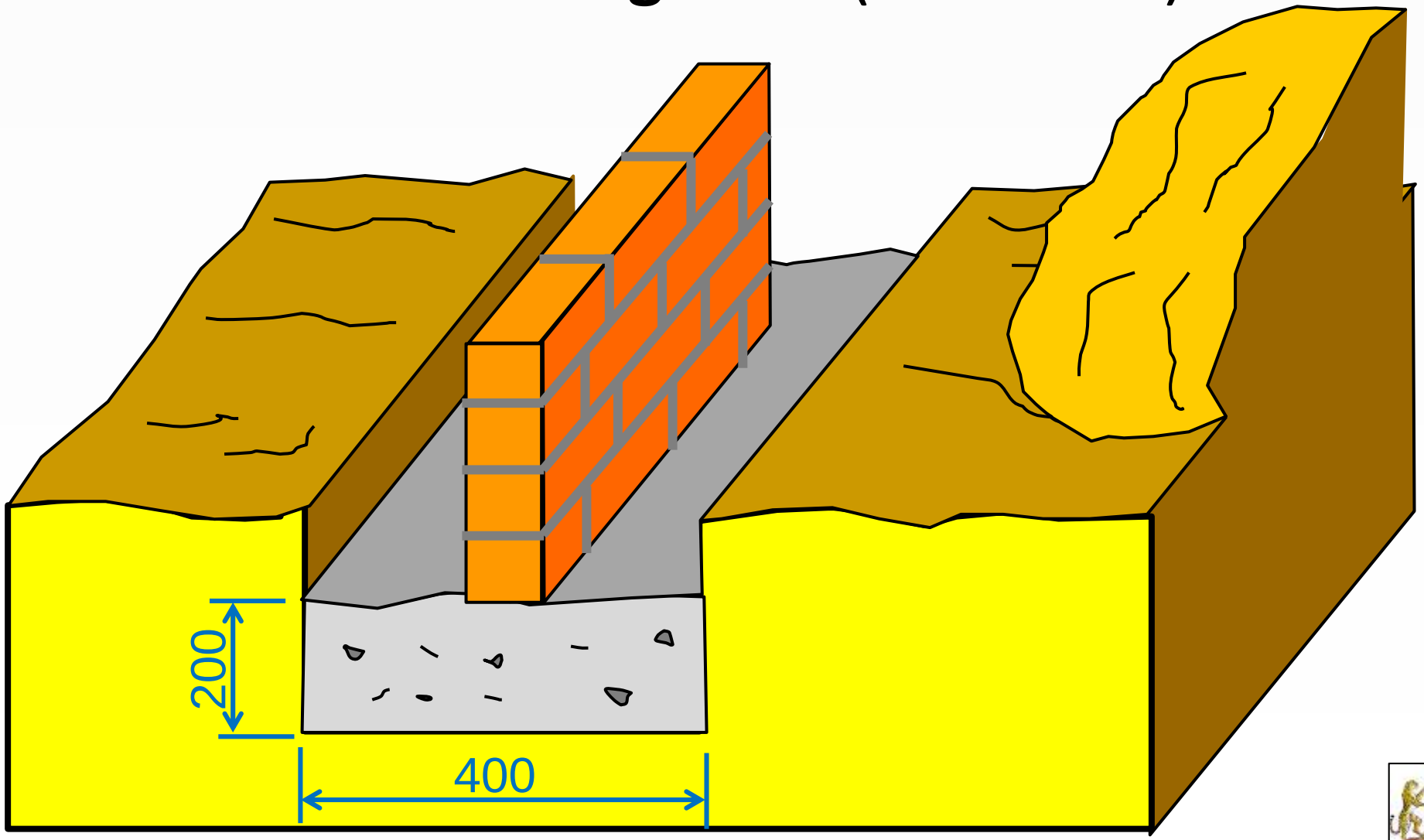
FOUNDATION DIMENSIONS

- **Non load bearing** walls (200 x 400)



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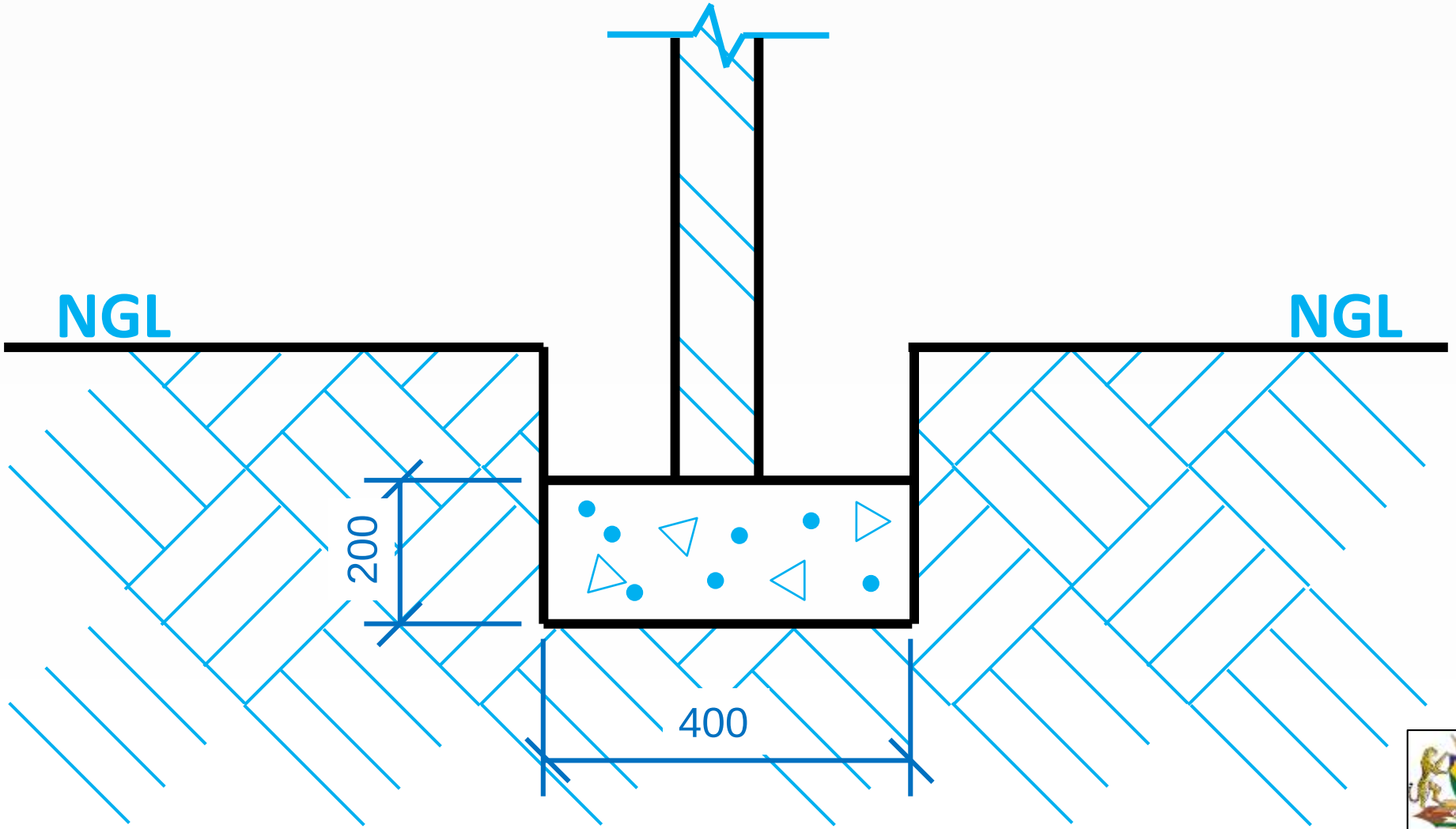

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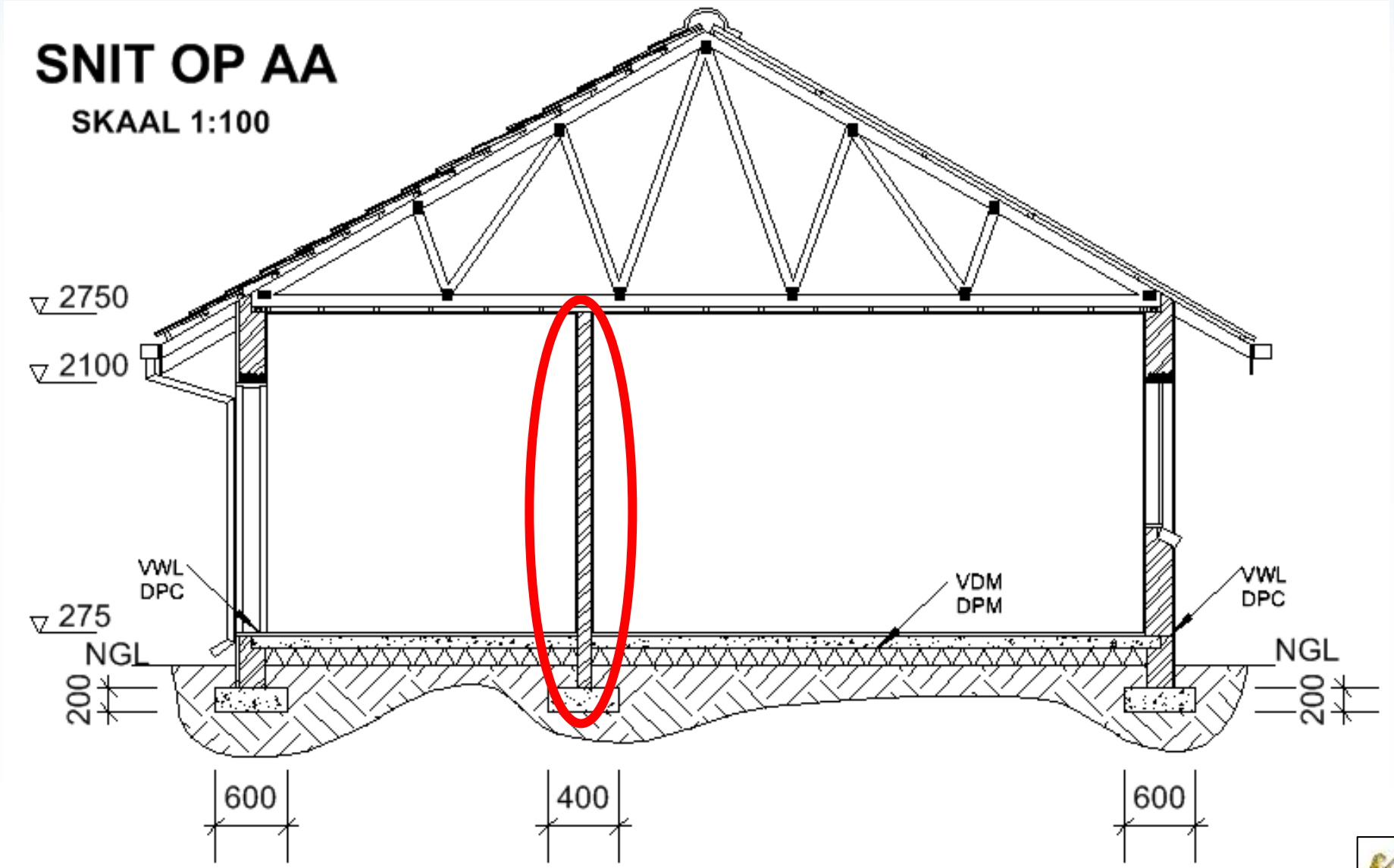
A SECTIONED VIEW (grade 12 level)



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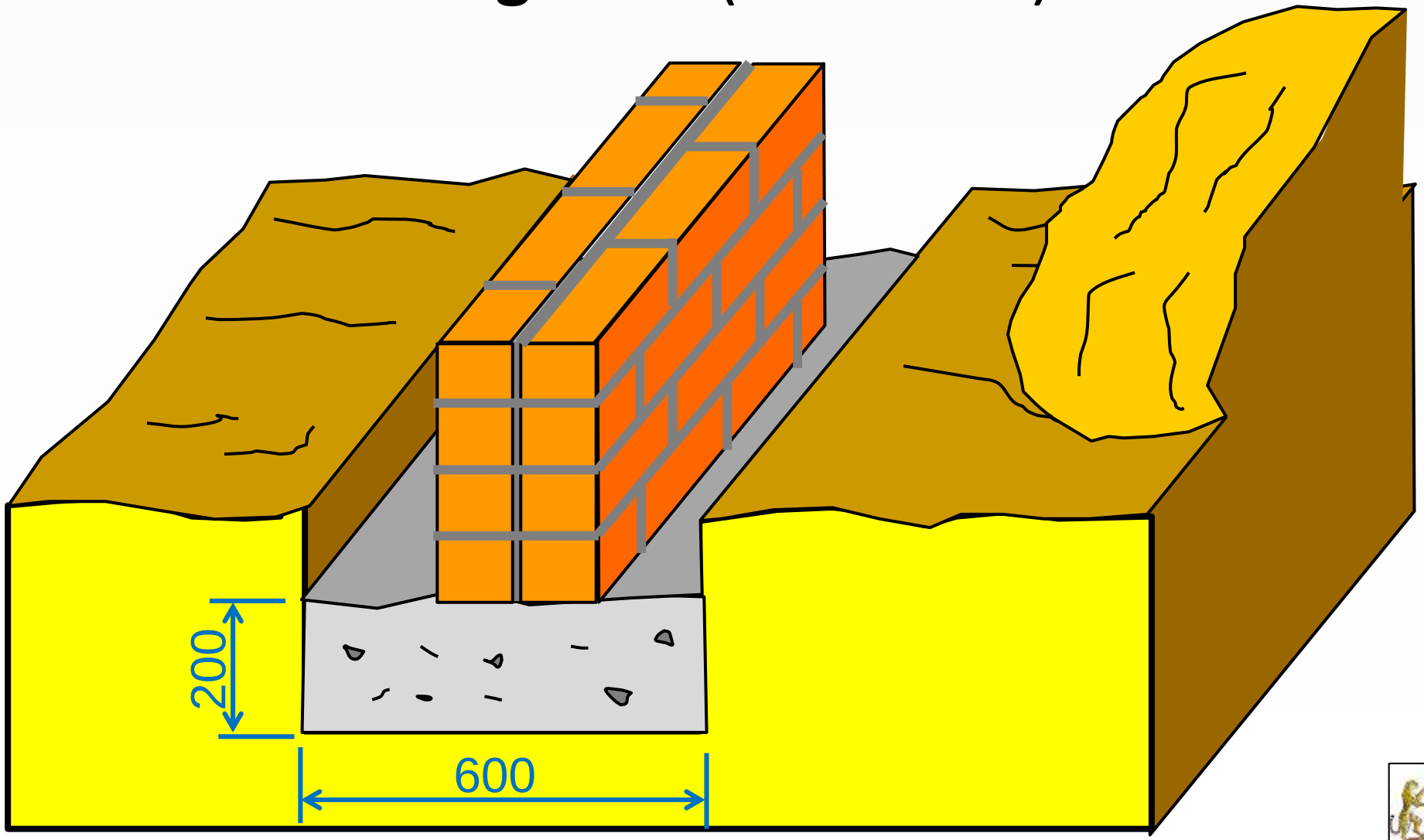
FOUNDATION DIMENSIONS

- **Load bearing** walls (200 x 600)



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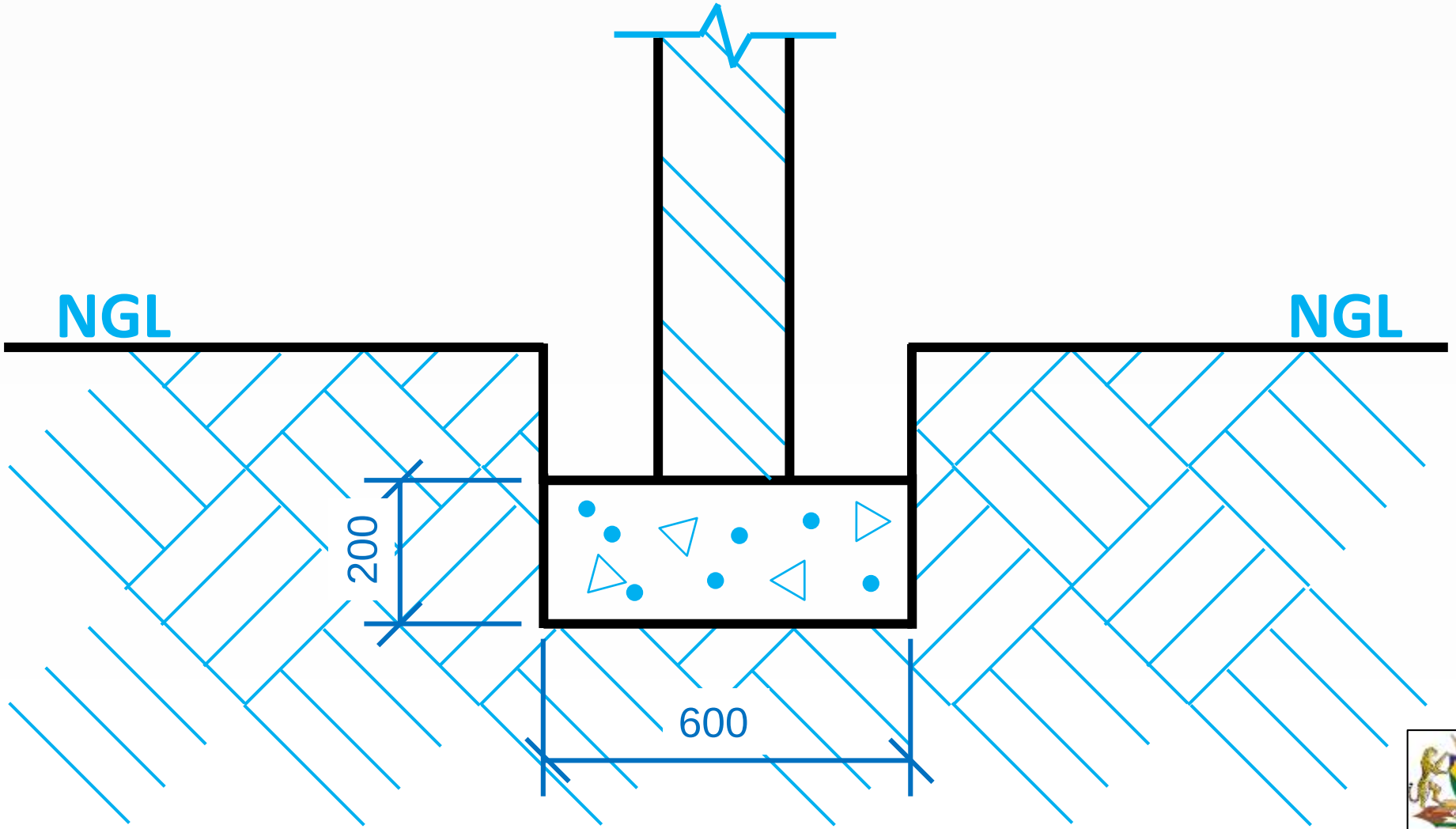

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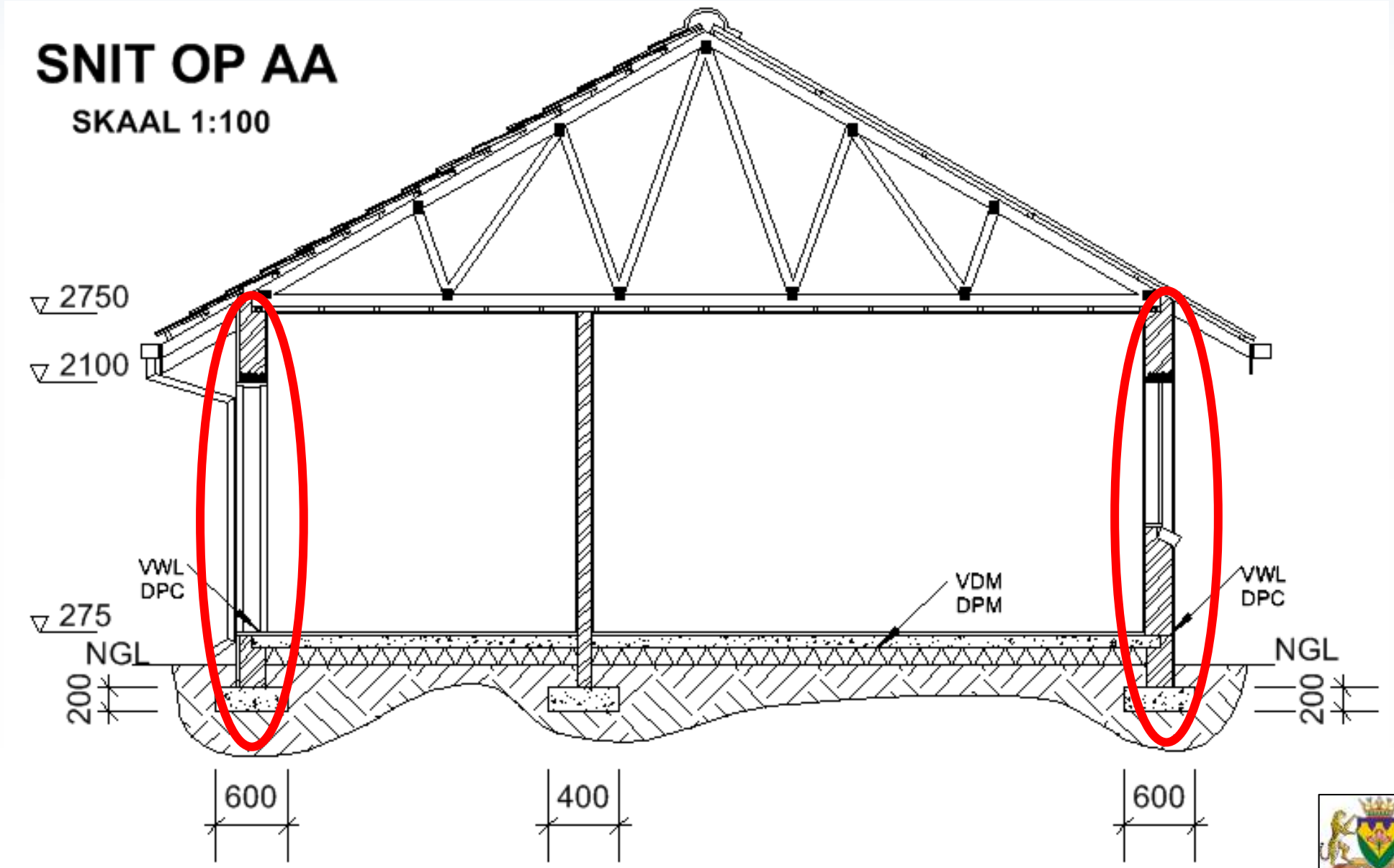

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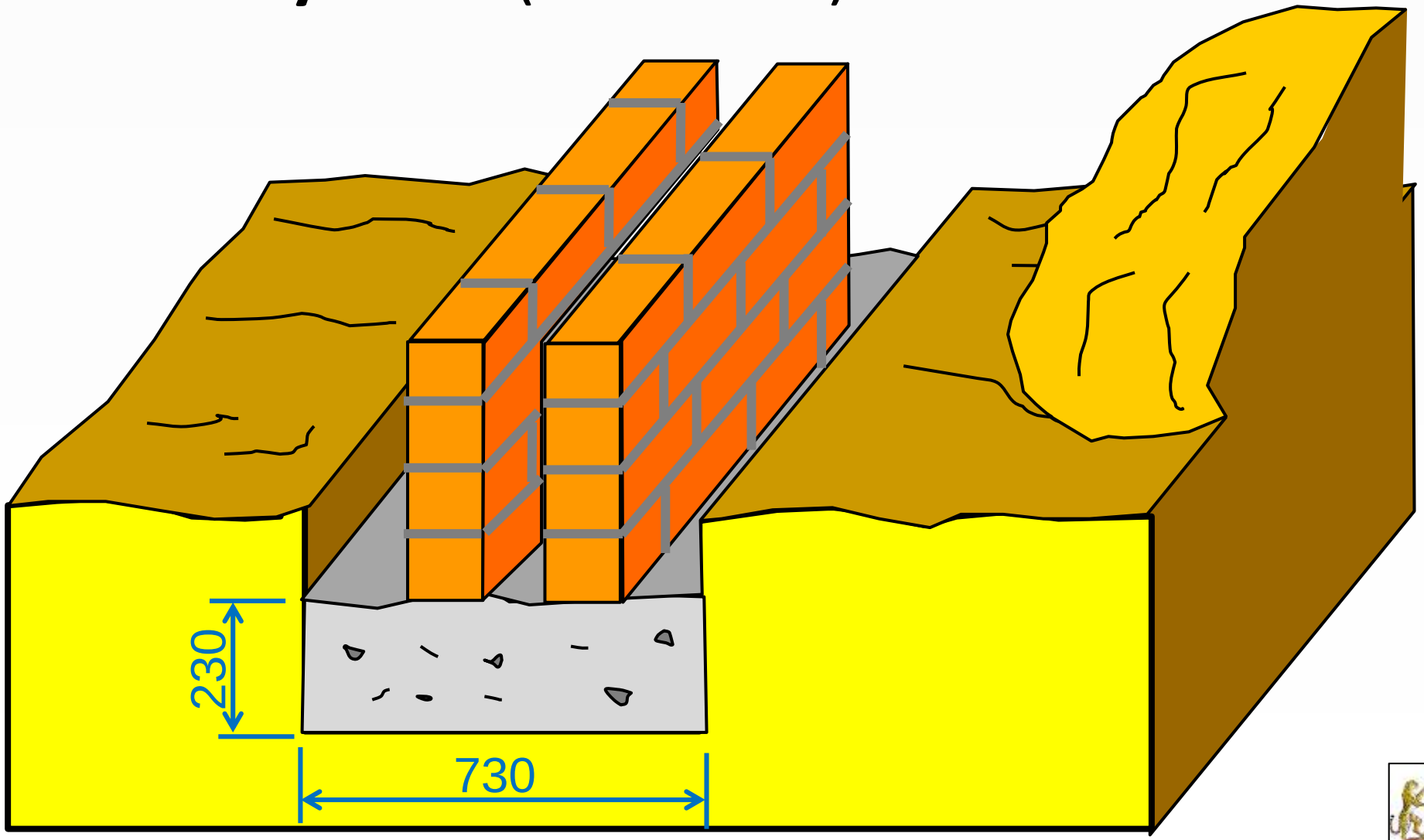
FOUNDATION DIMENSIONS

- **Cavity walls** (230 x 730)



FOUNDATION DIMENSIONS

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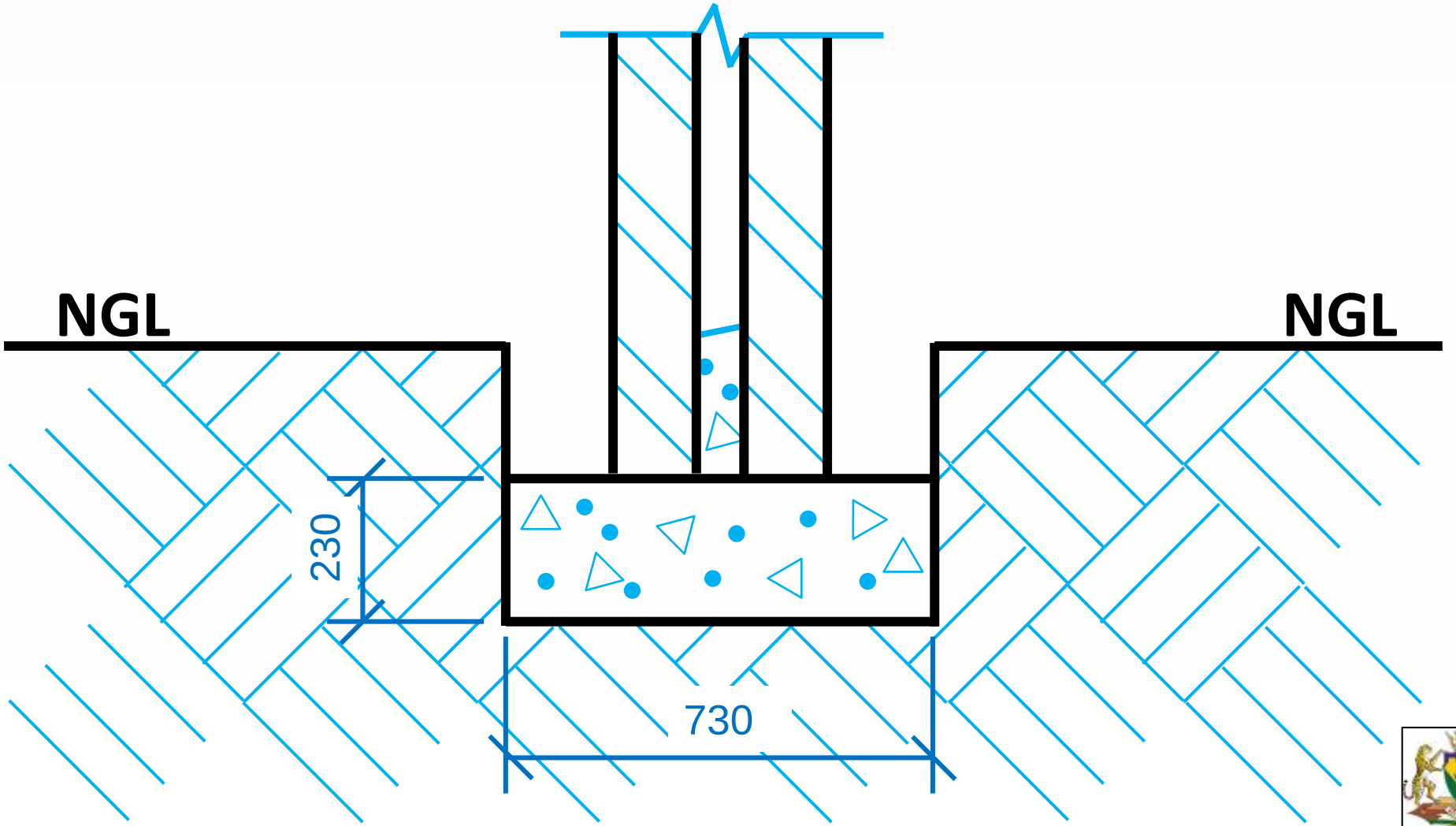

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FOUNDATION DIMENSIONS

- The cavity is never less than 50mm apart
- Must be free of any cement in between.

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