



TUDIENZELE PROJECT/RFSa DEMOCRATIC REPUBLIC OF CONGO

TSHIKAPA/KAMONIA TERRITORY/KASAÏ PROVINCE

Borehole with solar powered water scheme



Dimensions : Millimeters

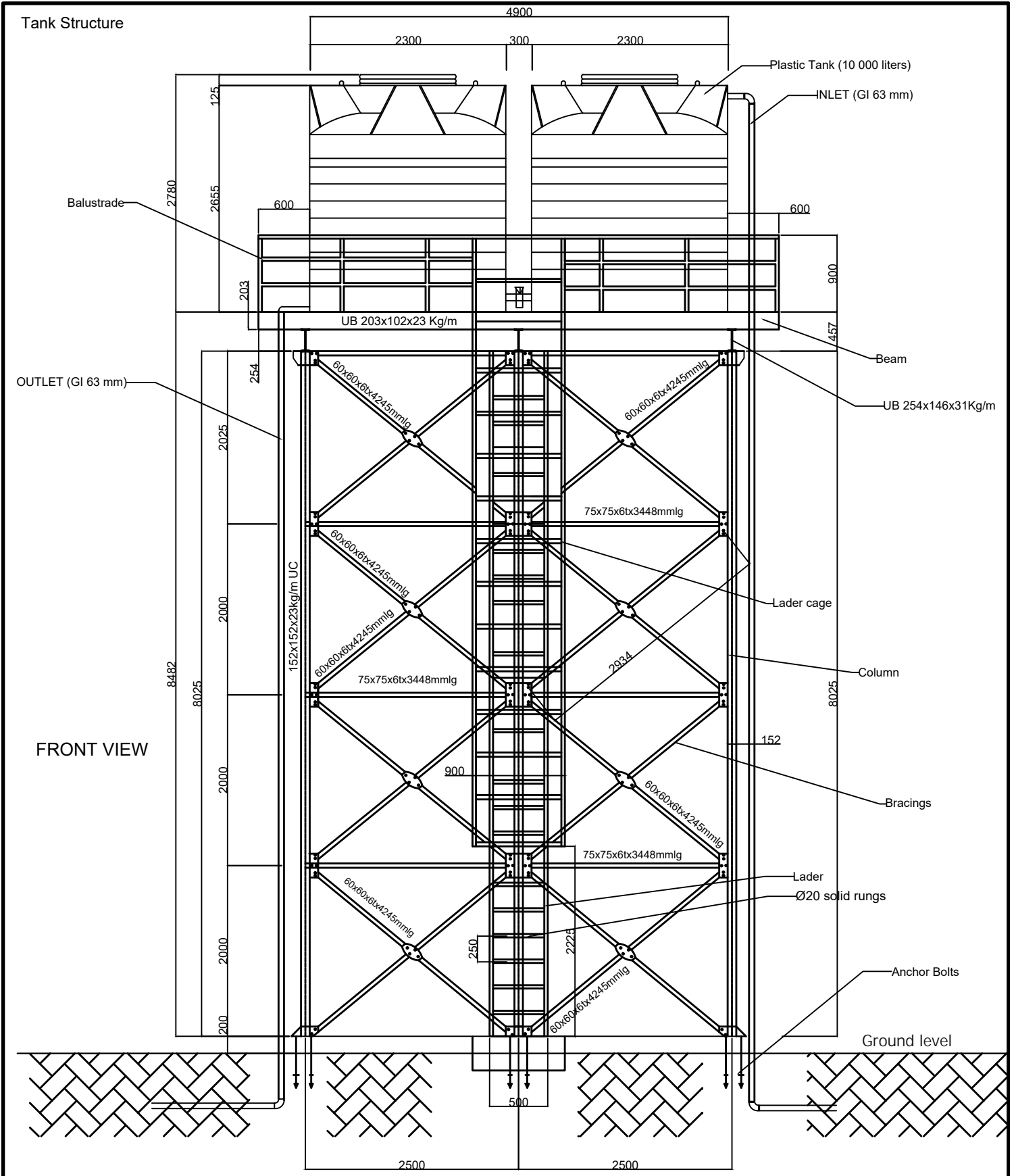
Scale : Draw to fit

Date: July 16, 2024

Sheet 001 of 015

Authors/Designers: Christophe Mongane
and Kabasele C. A

Approver : Victoria Fray



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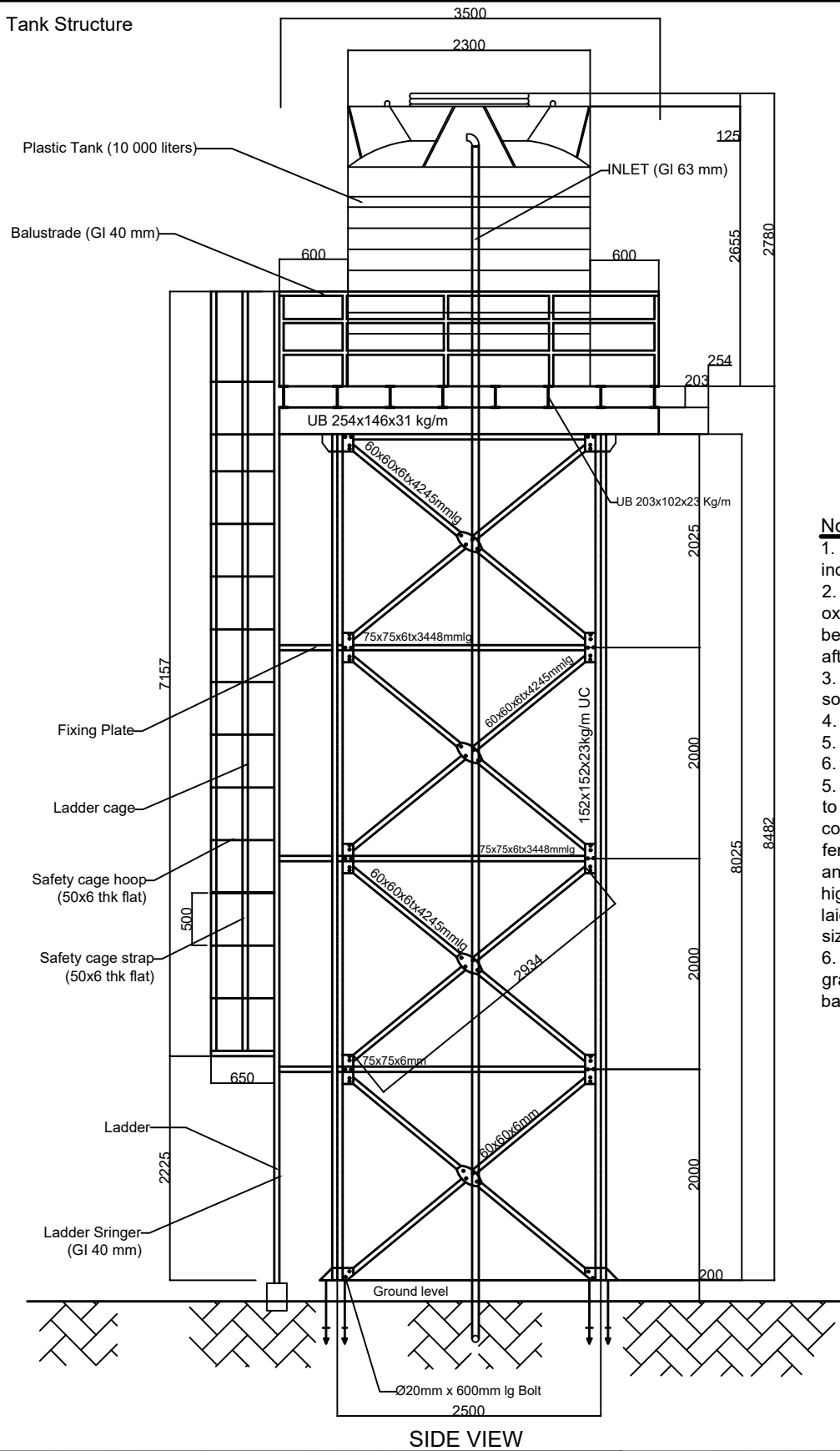
Author/Designer: Christophe Mongane

Approver: Victoria Fray

Date: July 12, 2024

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Tank Structure



SIDE VIEW

Note:

1. All dimensions are in "mm" unless otherwise indicated
2. Tank structure shall be painted one coat of red oxide primer and one coat of aluminium paint before despatch, and one coat of aluminium paint after installation
3. Foundation base shall be on stable undisturbed soil
4. All steel shall be grade 43
5. All bolts shall be grade 4.6
6. All gusset plates shall be thick 6 mm
5. A galvanized chainlink fence with barbed wire to be installed all around the tank structure, covering an area of 13 000 x 10 000 mm. The fence shall cover the tank structure, solar panels and control cabin. The fence shall be 2500 mm high, with 3" GI posts at 2000 mm centers and laid on a 300x300x600mm concrete mass. Mesh size shall be 40mmx40mm, and wire dia. 3mm.
6. Barbed wire at the top of the fence shall be grade 12-4-3-14R and installed on a galvanized V barb arm at 100 mm centers

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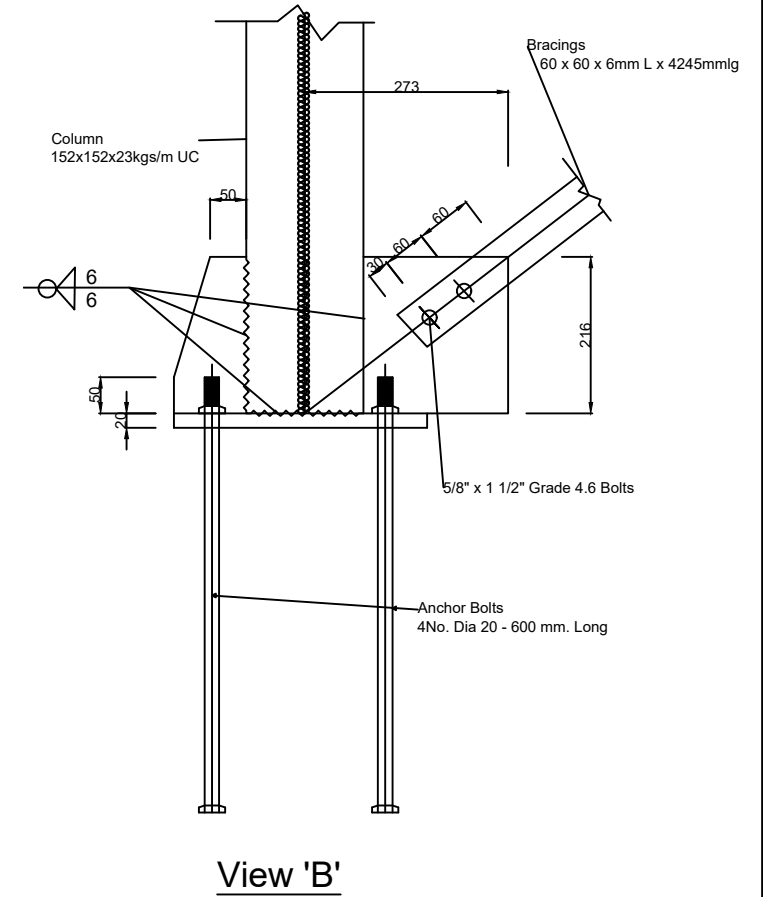
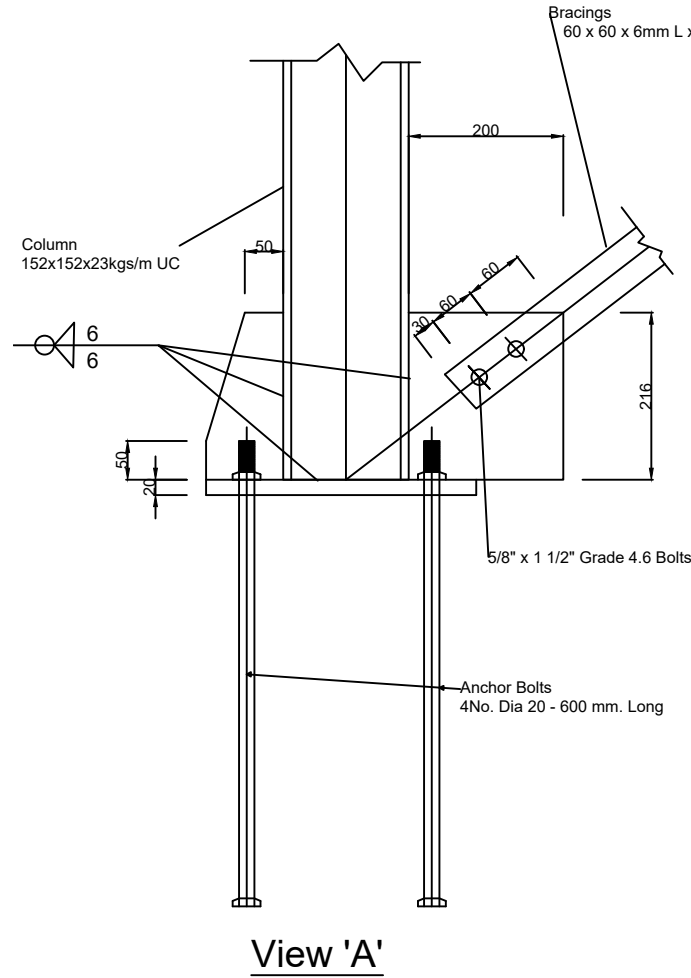
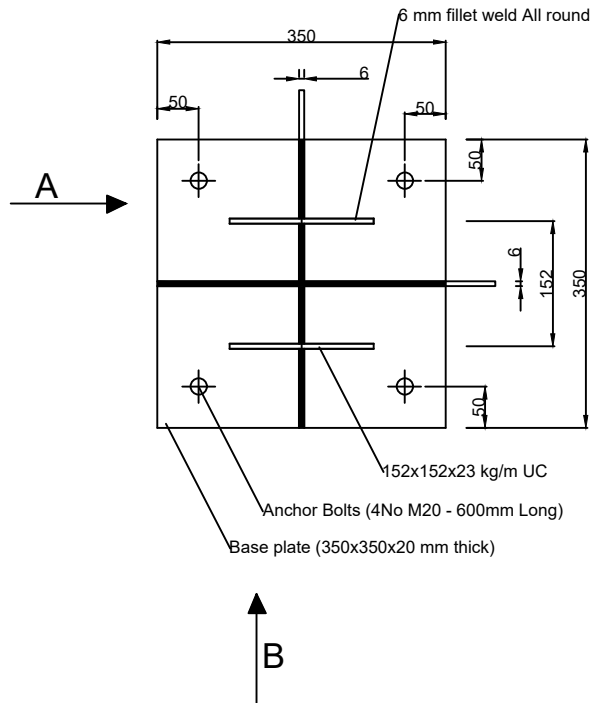
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Base Gusset Details : Section

Base Gusset Details: Plan



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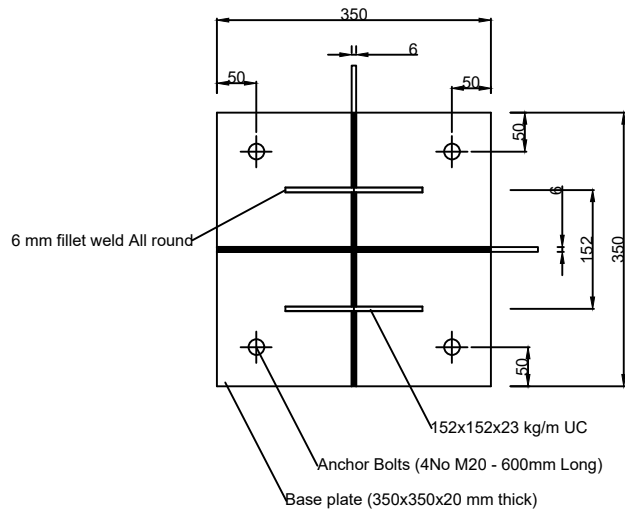
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Author/Designer: Christophe Mongane

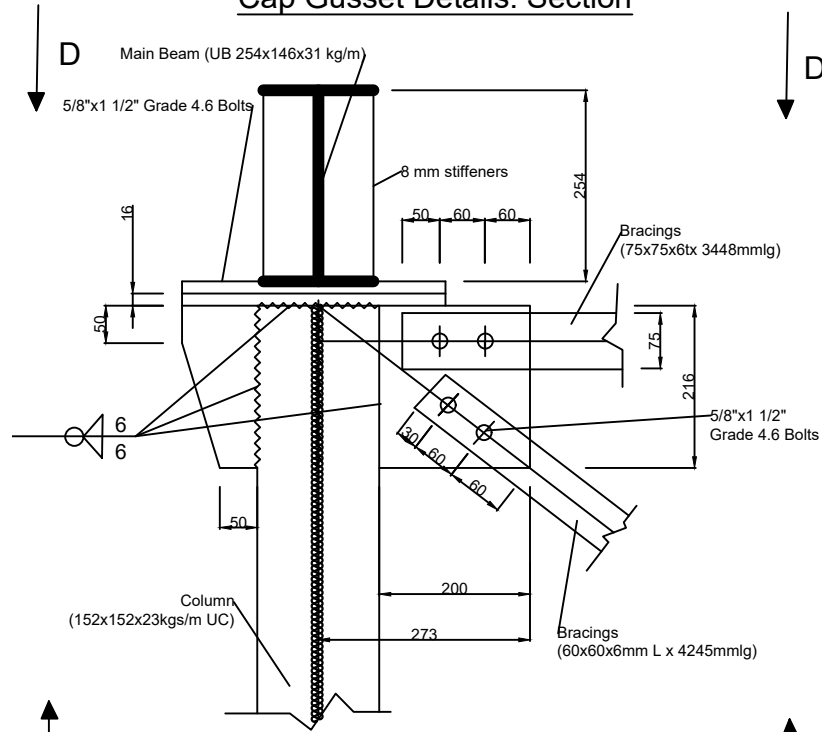
Approver : Victoria Fray

Cap Gusset Details: Plan

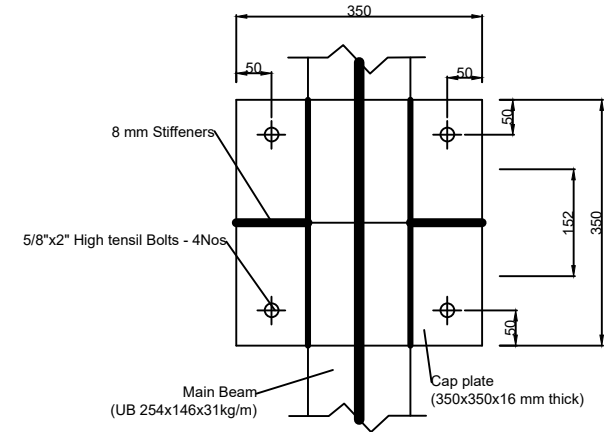


View 'C C'

Cap Gusset Details: Section



Stanchion top details Main Beam to Column



View 'D D'

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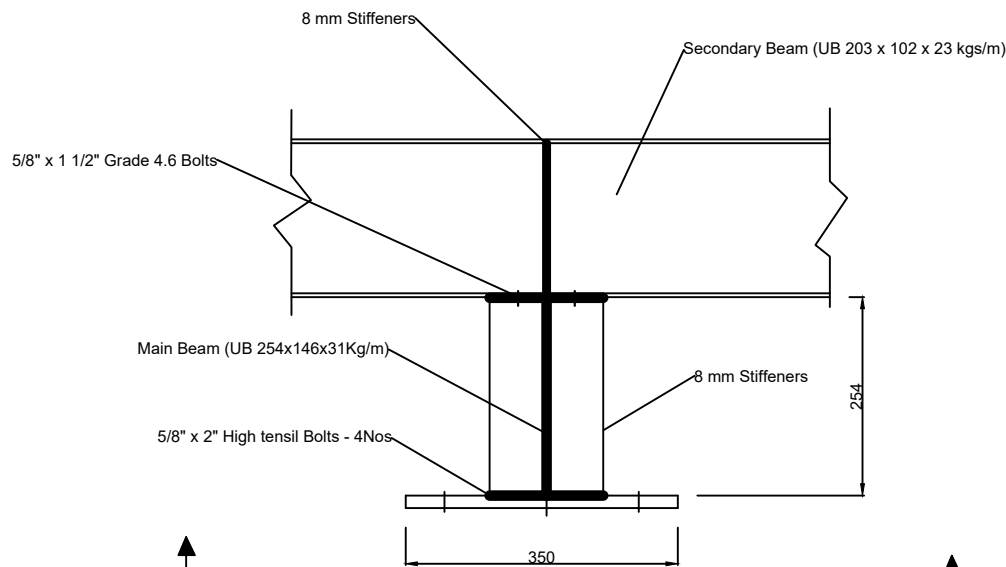
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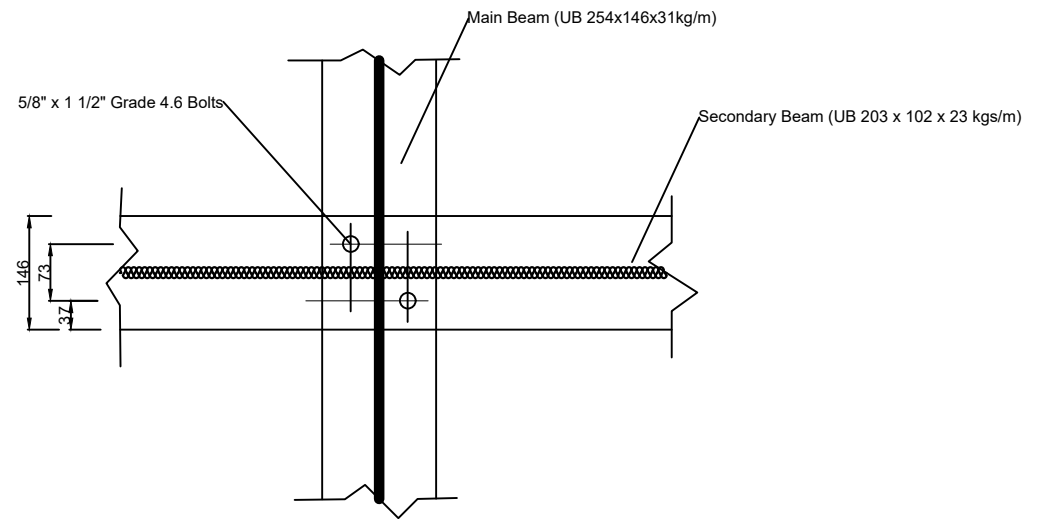
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Secondary Beam to main Beam connections



Secondary Beam to main Beam connections

View 'E E'

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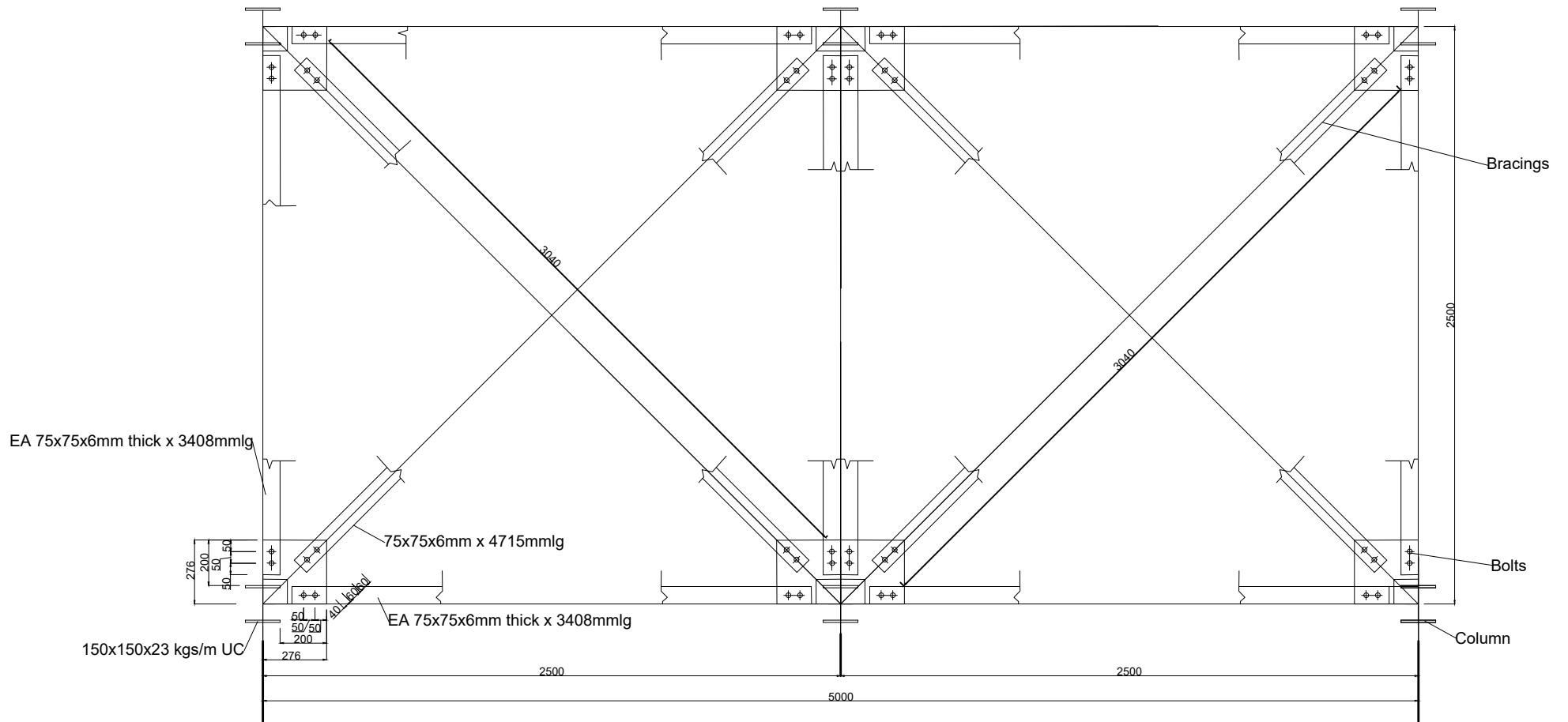
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Author/Designer: Christophe Mongane

Approver : Victoria Fray

GUSSET PLTS AND HORIZONTAL DIAGONAL BRACINGS DETAILS



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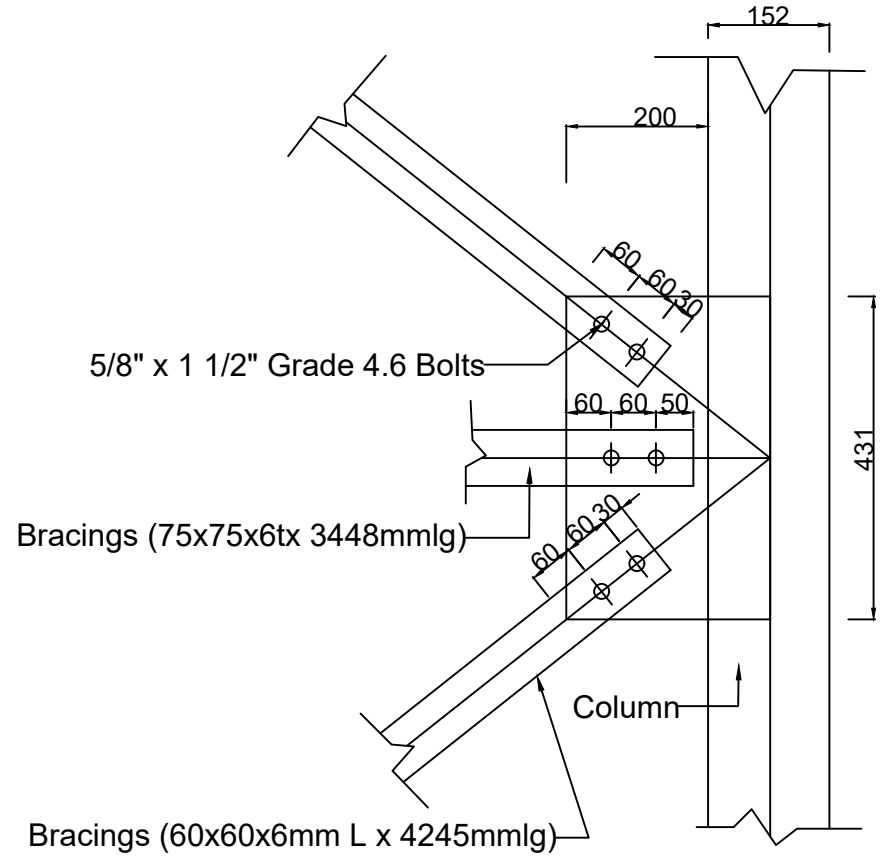
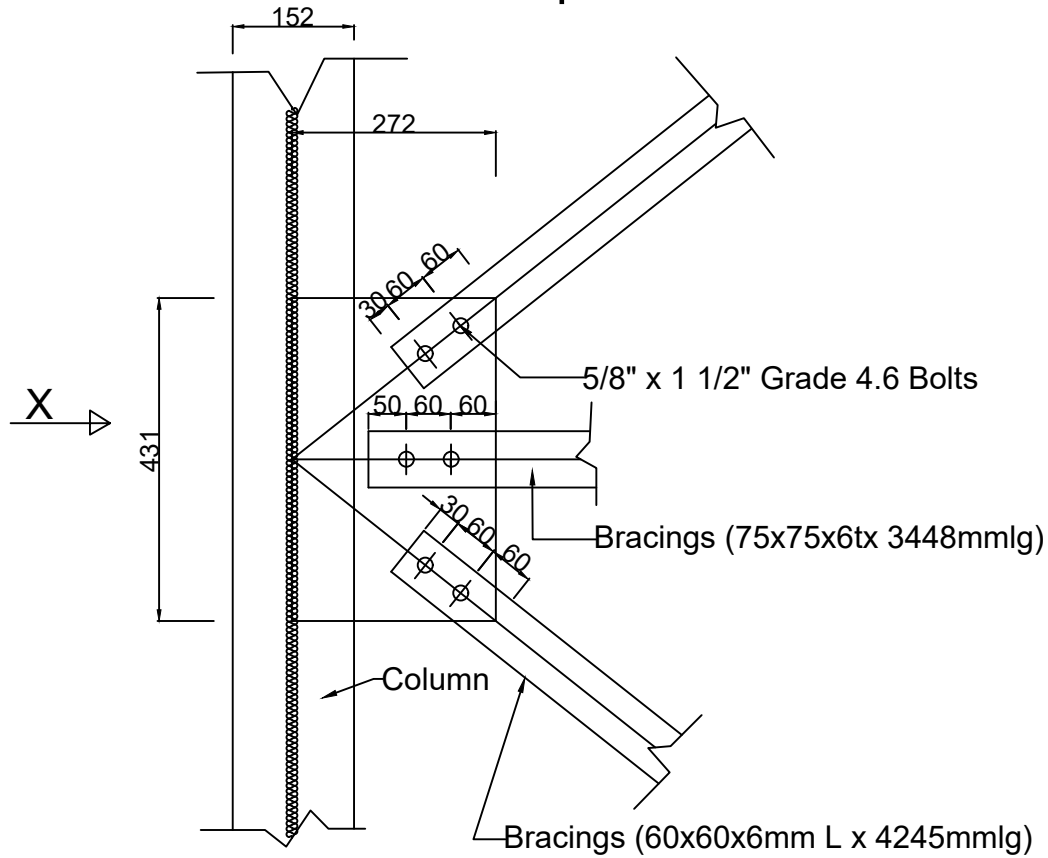
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Author/Designer: Christophe Mongane

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Span Gusset Details



Column to Column

View "X"

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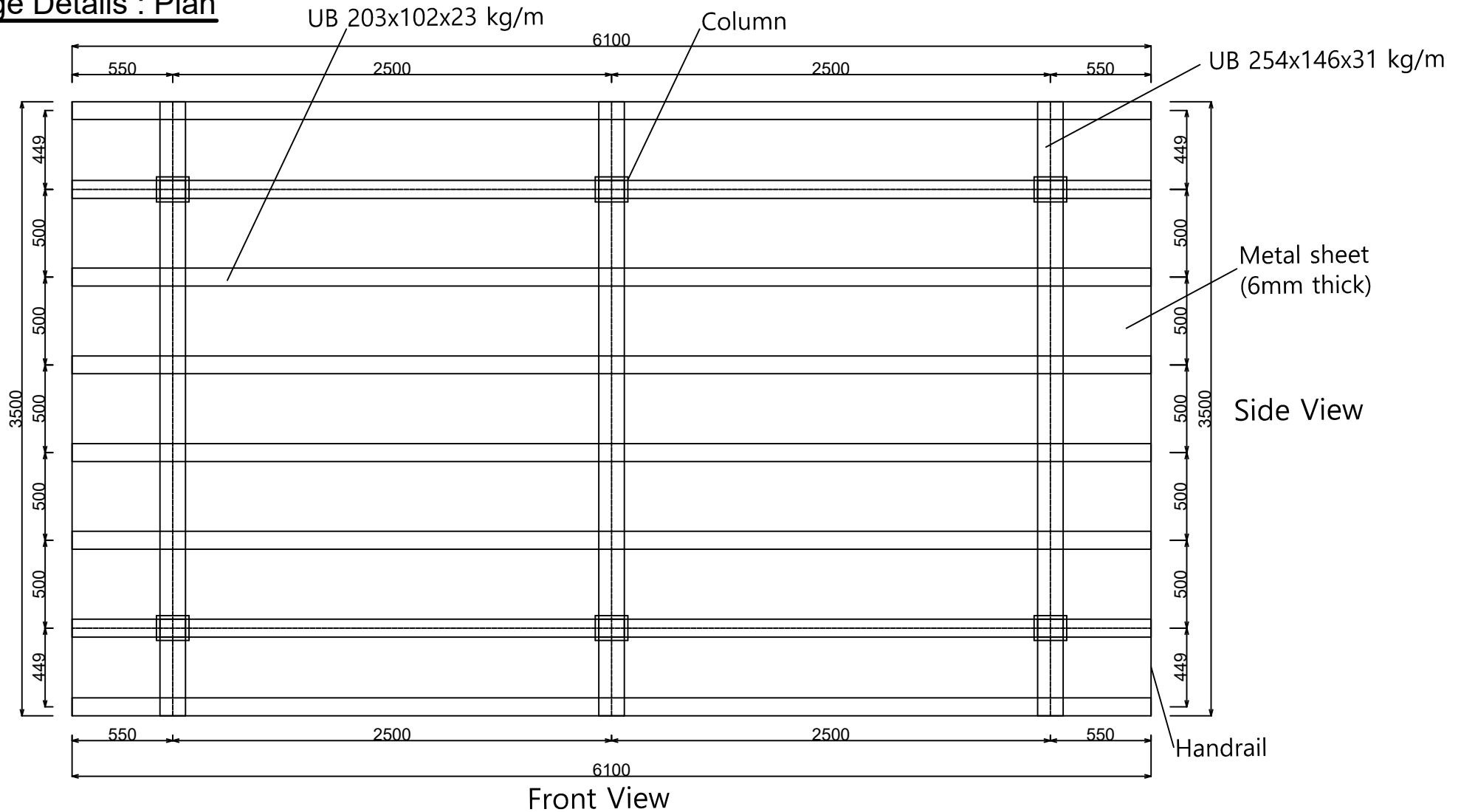
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Author/Designer: Christophe Mongane

Approver : Victoria Fray

Grillage Details : Plan



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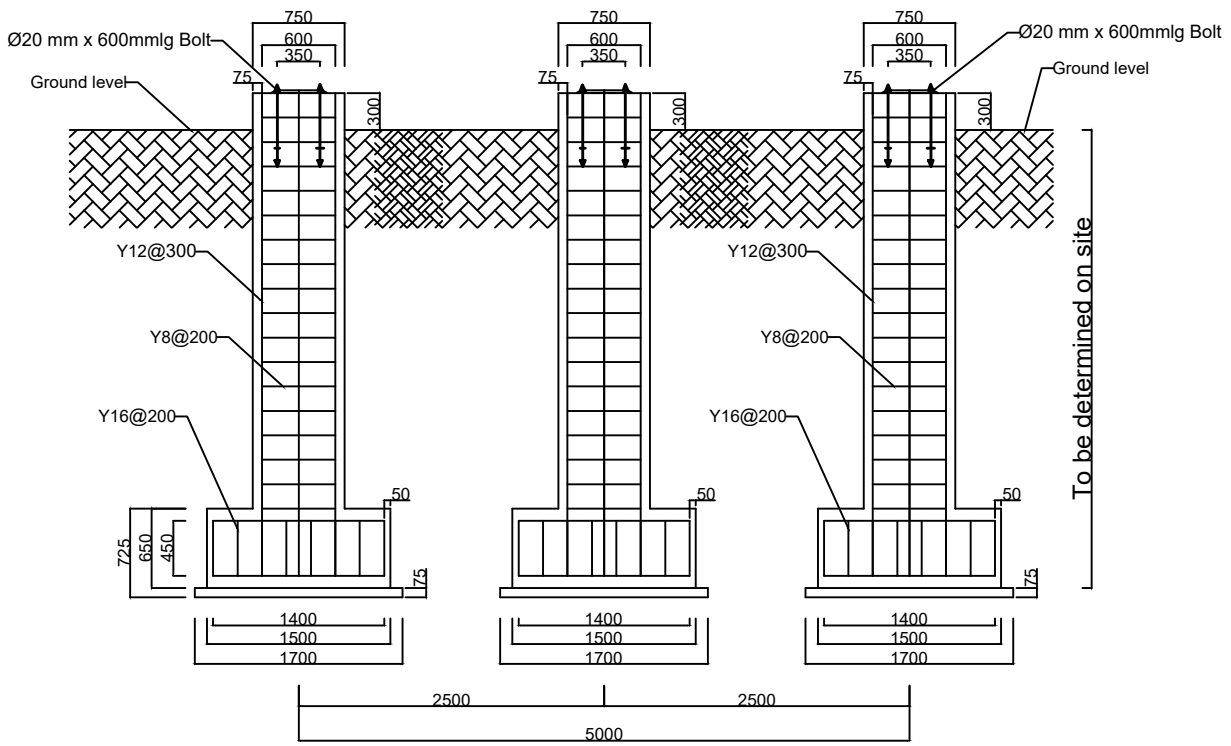
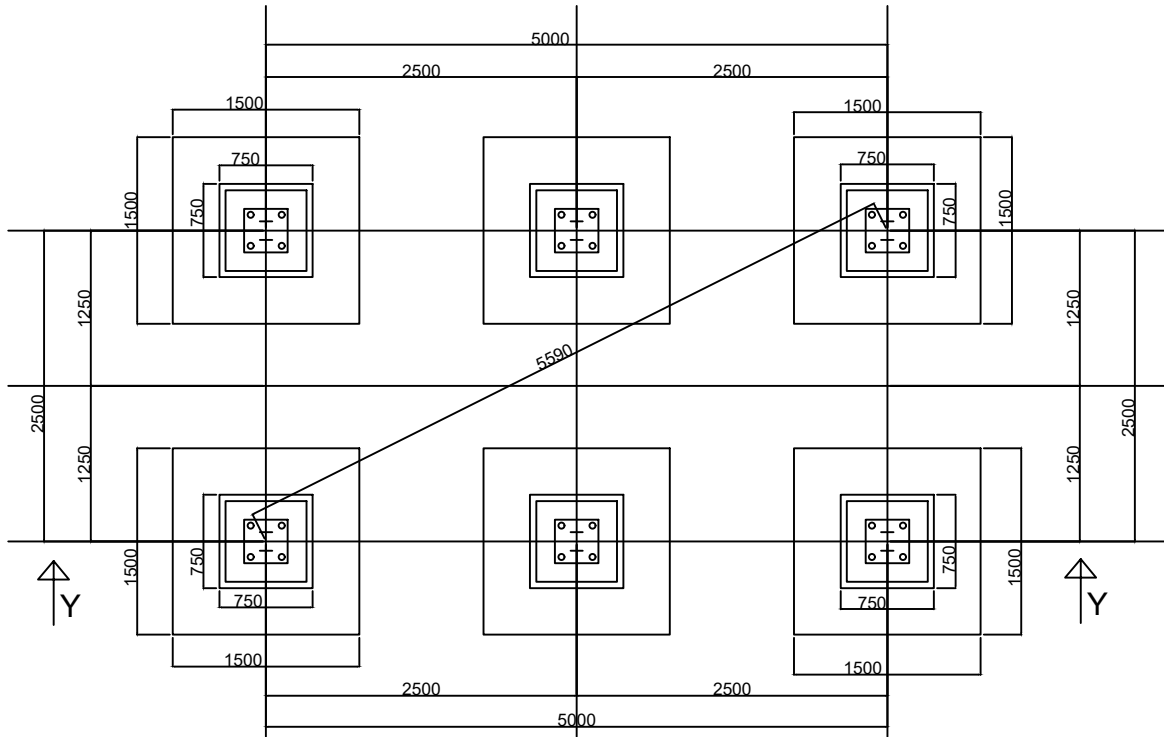
Date: July 22, 2024

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Author/Designer: Christophe Mongane
Romain Cibangu

Approver : Victoria Fray

Typical Foundation Details: Plan view



SECTION Y Y

Foundation Details

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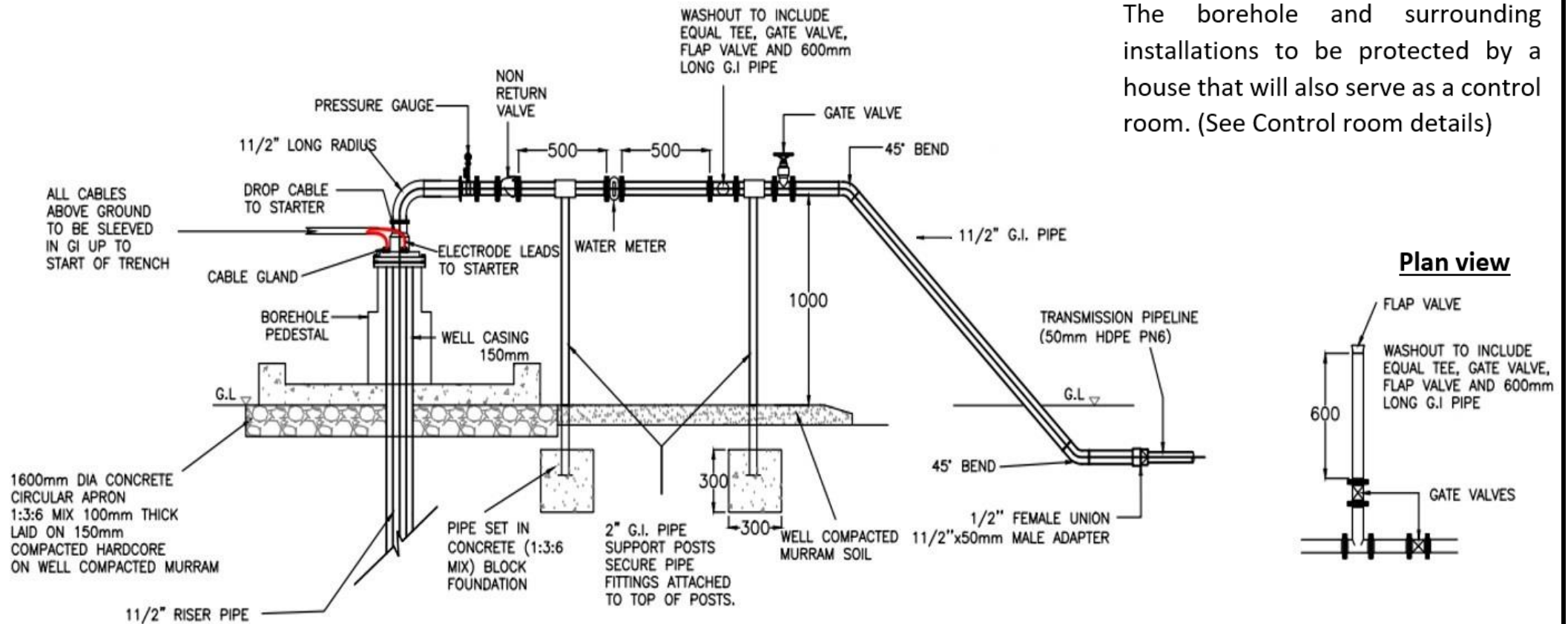
Author/Designer: Christophe Mongane

Approver: Victoria Fray

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Borehole head details



Note:

The borehole and surrounding installations to be protected by a house that will also serve as a control room. (See Control room details)

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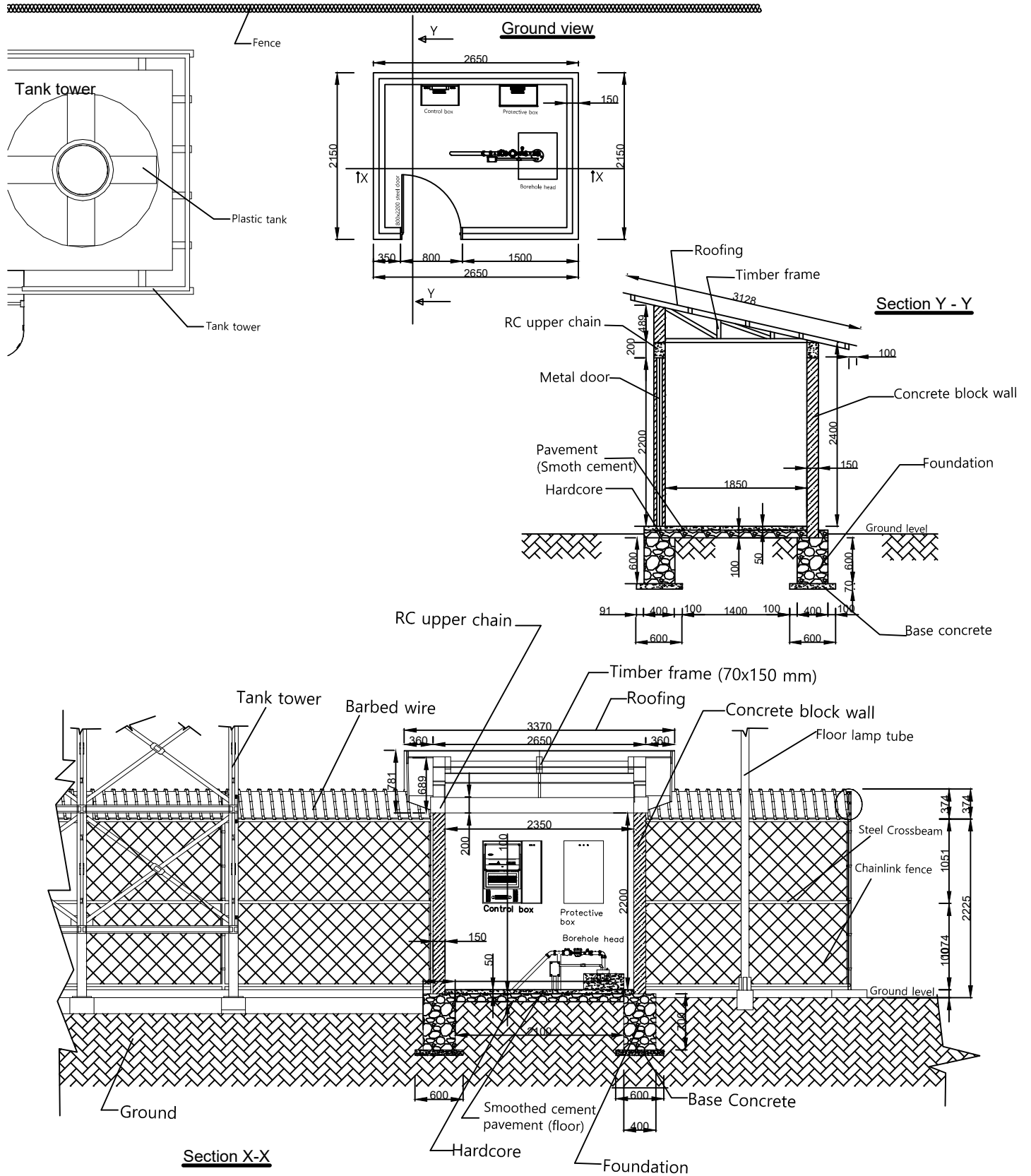
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Author/Designer: Christophe Mongane

Approver : Victoria Fray

Control Room Details



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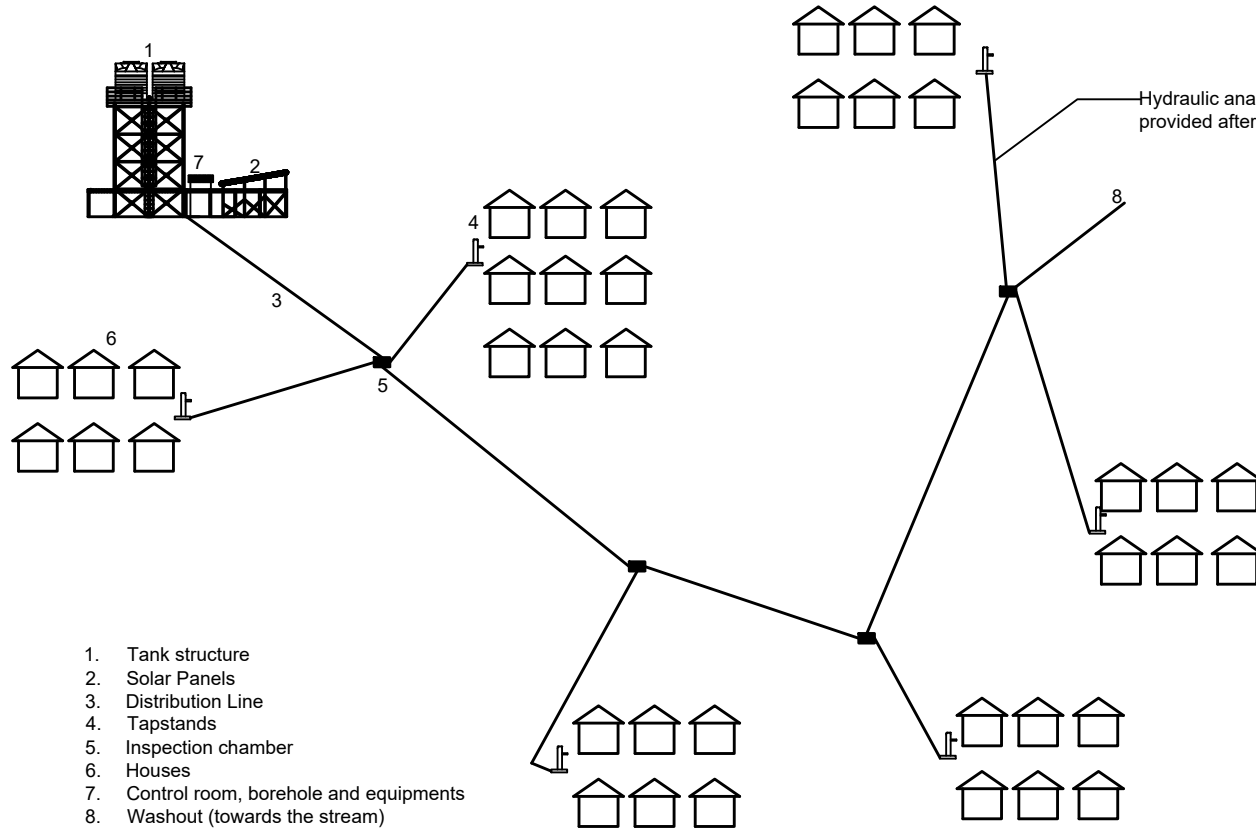
Authors/Designers: Christophe Mongane and Eric Mulume

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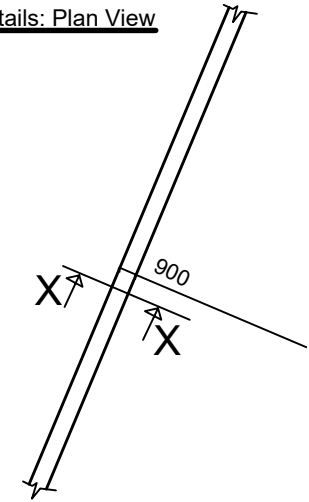
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DISTRIBUTION SCHEME

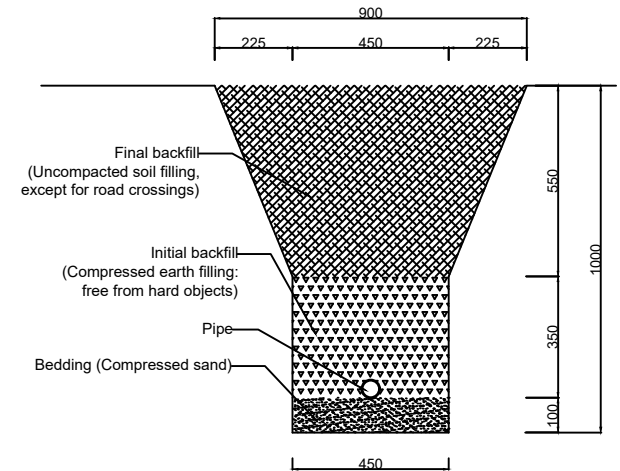


1. Tank structure
2. Solar Panels
3. Distribution Line
4. Tapstands
5. Inspection chamber
6. Houses
7. Control room, borehole and equipments
8. Washout (towards the stream)

Trench Details: Plan View



Trench Details: Section



Section X - X

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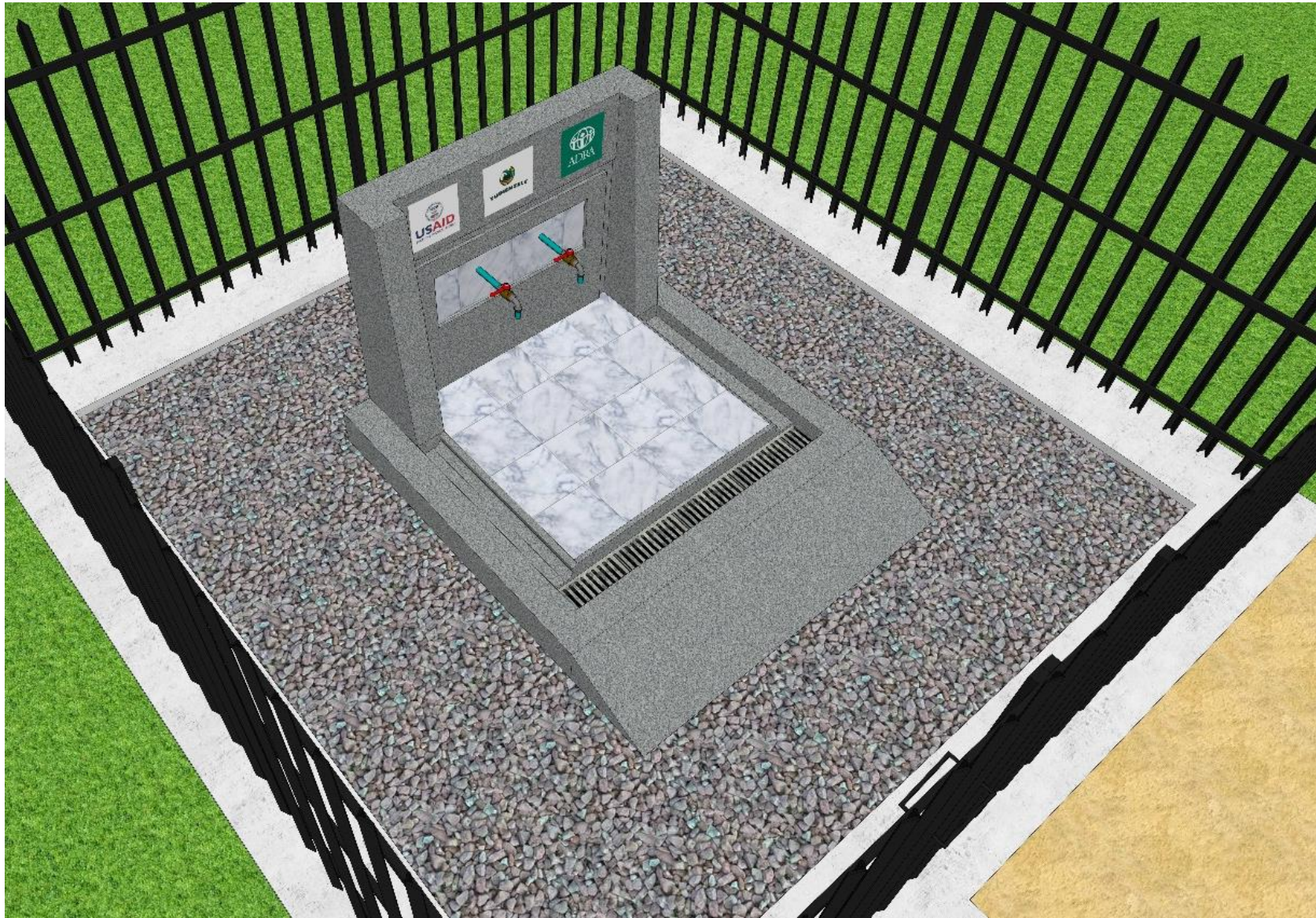
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Authors/Designers: Christophe Mongane and Constatin Neci

Approver : Victoria Fray

TAPSTAND



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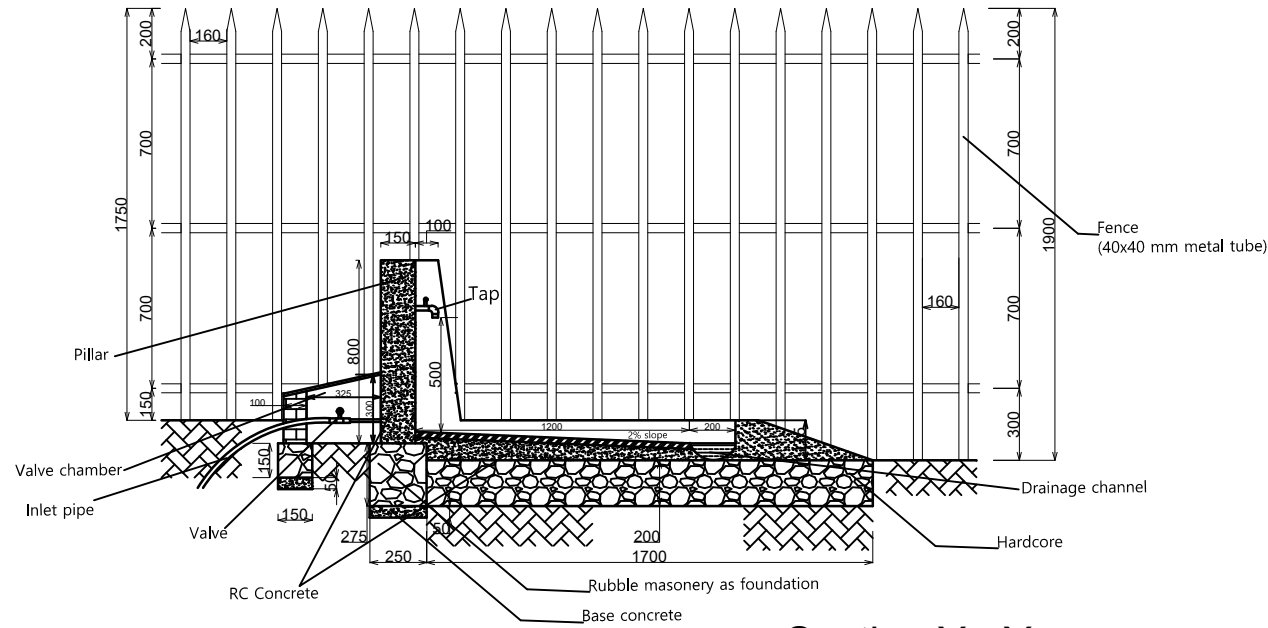
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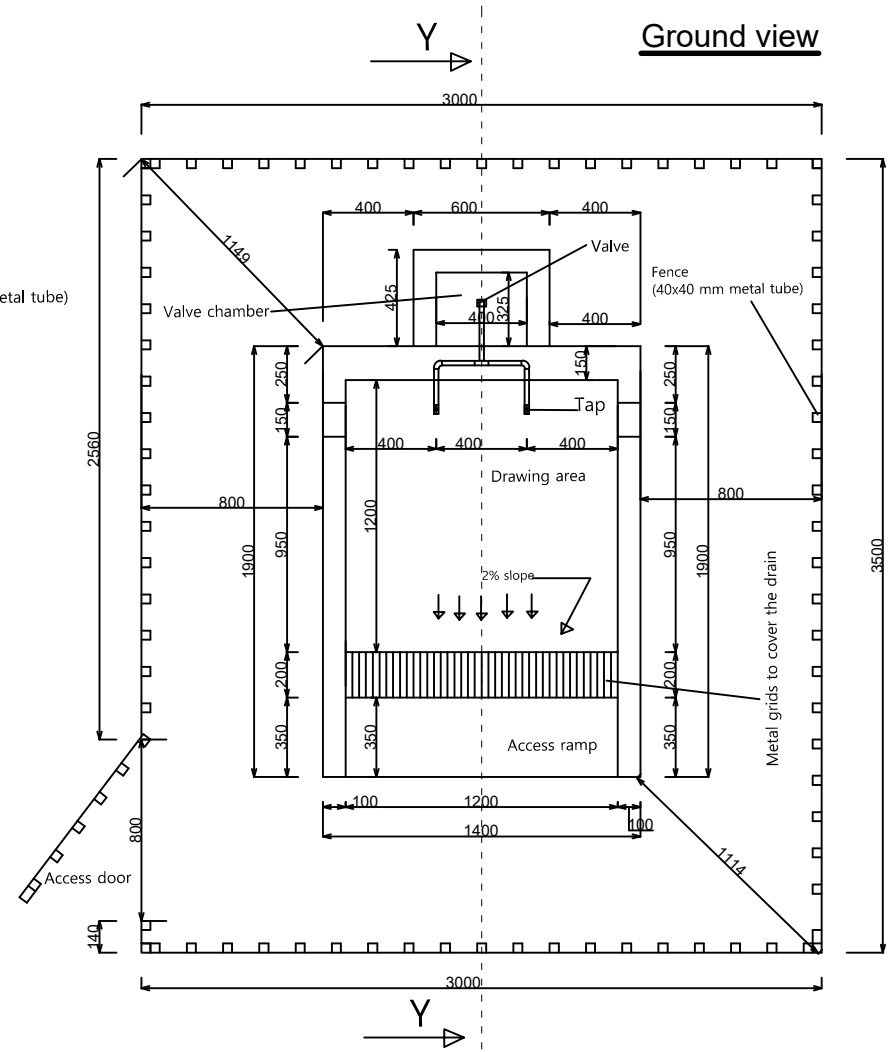
Authors/Designers: Christophe Mongane
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Approver : Victoria Fray

Tapstand Details



Section Y - Y



Note:

1. Connection pipe from the main water scheme to be 32 mm HDPE. Remaining connections and accessories at the tapstand shall be GI 3/4" except for inlet connection fittings that shall be 1". The taps to be of the same size as connection fittings at the tapstand (3/4")
2. Slope at the drawing area to be 2%. Waste water shall be directed to a 200x200 mm sub-surface drain
3. Fence components shall be painted one coat of red oxide primer and two coats of green gloss paint after installation

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