

**PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-**

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**PROJECT:**

**PROPOSED BALANBAL  
BOREHOLE REHABILITATION  
-BALANBAL DISTRICT-**

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**IMPLEMENTING AGENCY.**



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**IOM International Organization for Migration**

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**GOVERNMENT:**

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# PROPOSED BALANBAL BOREHOLE REHABILITATION

## DRAWING INDEX

APRIL 2016

	SHEET N <sup>o</sup>	SHEET TITLE	DRAWING CONTENT
01.	01/32		Cover Page
02.	02/32		Drawing Index
03.	03/32		Site Location
04.	04/32		Site photos
05.	05/32		Proposed Master Plan
06.	06/32	WATER TANK	Floor Layout
07.	07/32		Elevations_1
08.	08/32		Elevations_2
09.	09/32		Sections
10.	10/32		3D Models
11.	11/32		Structural details
12.	12/32	GENERATOR SHED	Floor Layout
13.	13/32		Elevations
14.	14/32		Sections
15.	15/32		3D Models
16.	16/32		Structural details
17.	17/32	WATER KIOSK	Floor Layout
18.	18/32		Elevations
19.	19/32		Sections
20.	20/32		3D Models
21.	21/32	CARETAKERS ROOM	Floor Layout
22.	22/32		Elevations
23.	23/32		Sections
24.	24/32		3D Models
25.	25/32		Structural details
26.	26/32	LATRINES	Details
27.	27/32		3D Models
28.	28/32	BOUNDARY FENCE	Floor Layout
29.	29/32		Elevations_External 1
30.	30/32		Elevations_External 2
31.	31/32	WATER TROUGHS	Layout
31.	32/32		3D Scenes



**Balanbal borehole**

Image © 2017 CNES / Airbus  
US Dept of State Geographer

Google earth  
Earth Point

1984

5°45'51.07" N 45°45'35.15" E elev 1169 ft eye alt 8683 ft

**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

*Coordinates*

Ref.	Latitude	Longitude
Site.	05° 45.650' S.	045° 45.273' E.

**SHEET TITLE:**  
**SITE LOCATION**

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

<b>DRAWING TITLE:</b>
<b>DRAWING N°:</b>
<b>PROJECT N°:</b>

**LOCATION**  
**SHEET N°:**  
**03 / 32**



PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
EXISTING SITE PHOTOS

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

SITE PHOTOS

SHEET N<sup>o</sup>:  
**04/32**



**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
PROPOSED MASTER PLAN

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

**DRAWING TITLE:**

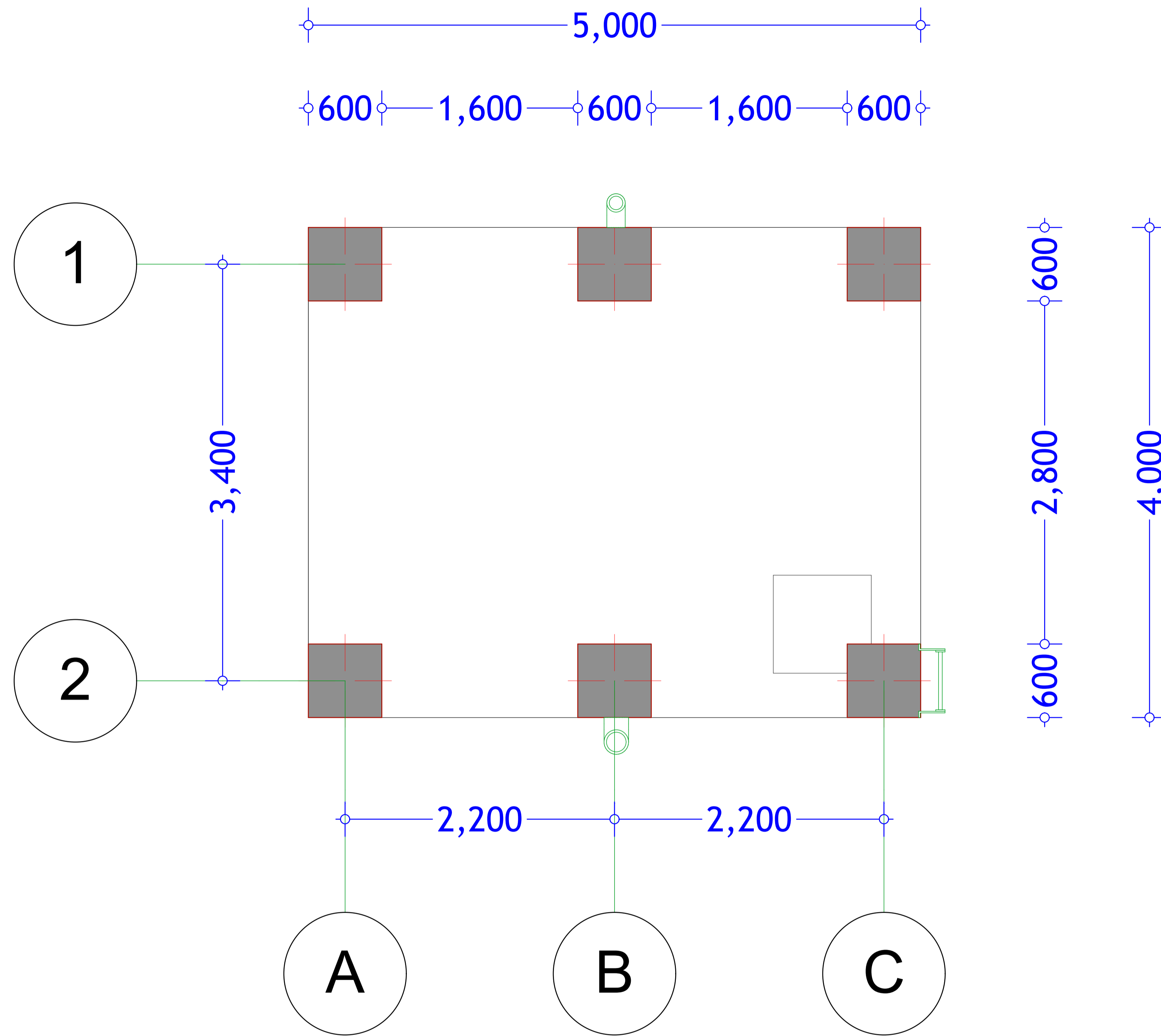
DRAWING N<sup>o</sup>:

PROJECT N<sup>o</sup>:

**MASTER PLAN**

SHEET N<sup>o</sup>:

**05/32**



# Floor plan

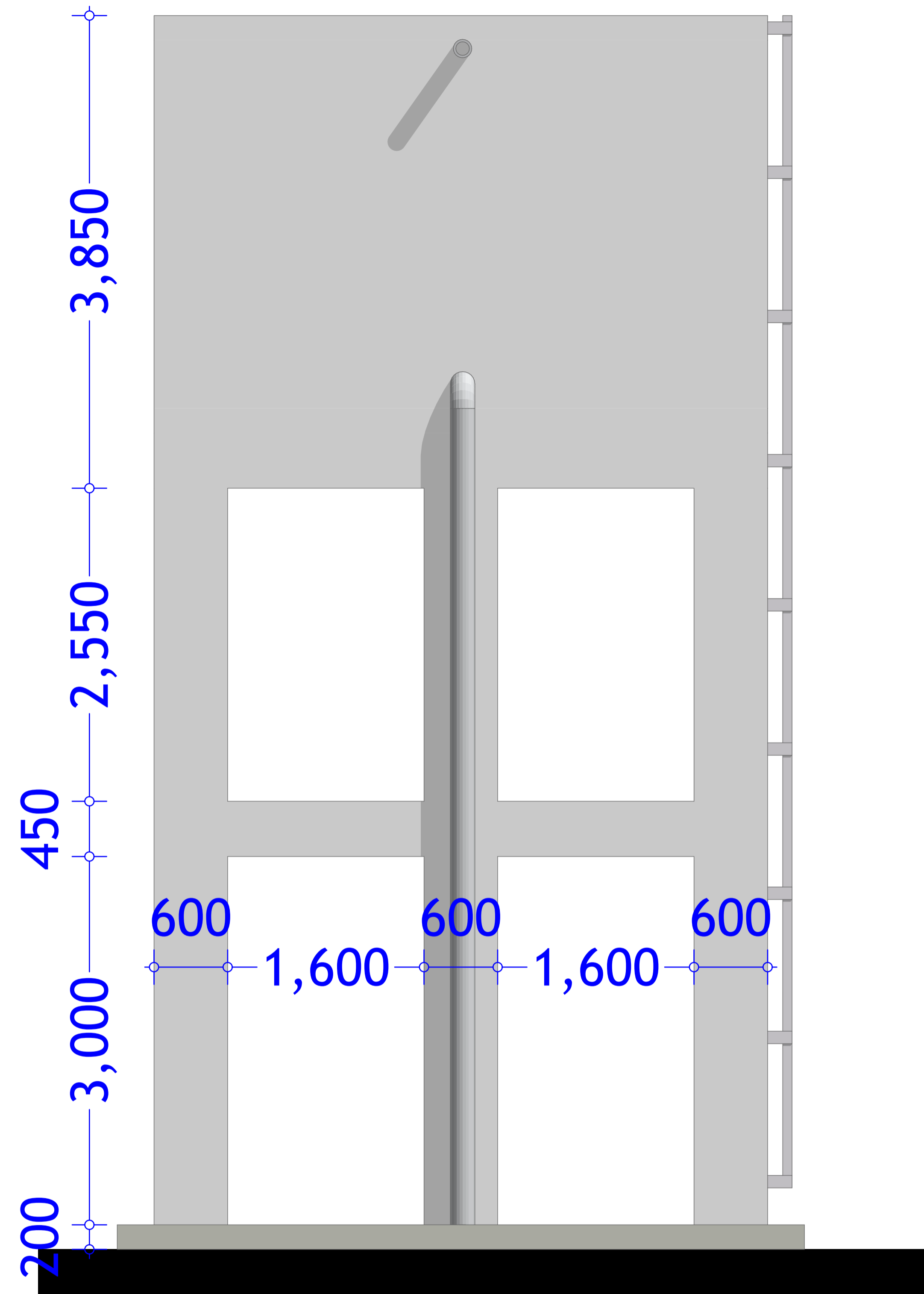
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
FLOOR LAYOUT

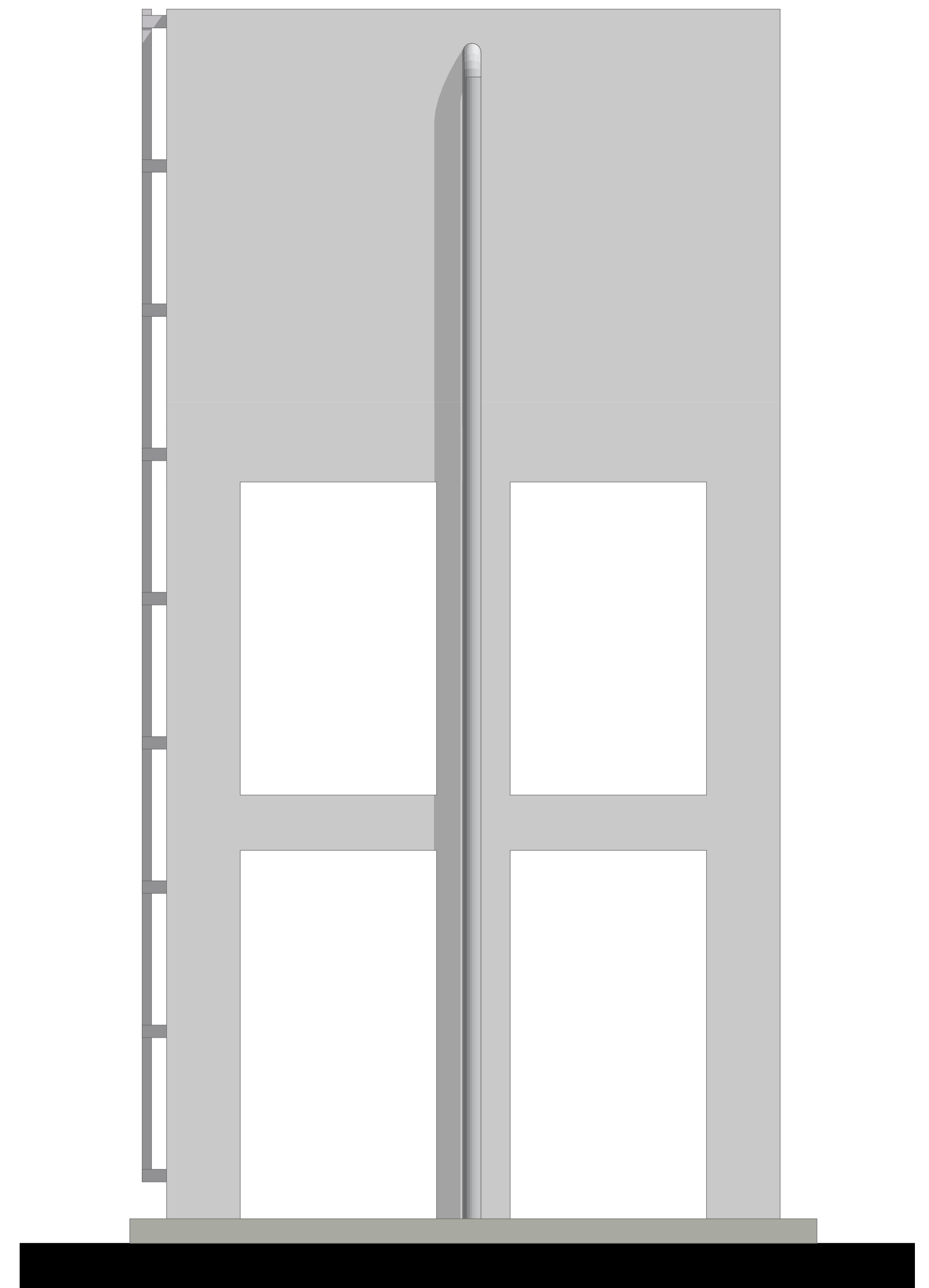
SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

WATER TANK

SHEET N<sup>o</sup>:  
06 / 32



South Elevation



North Elevation

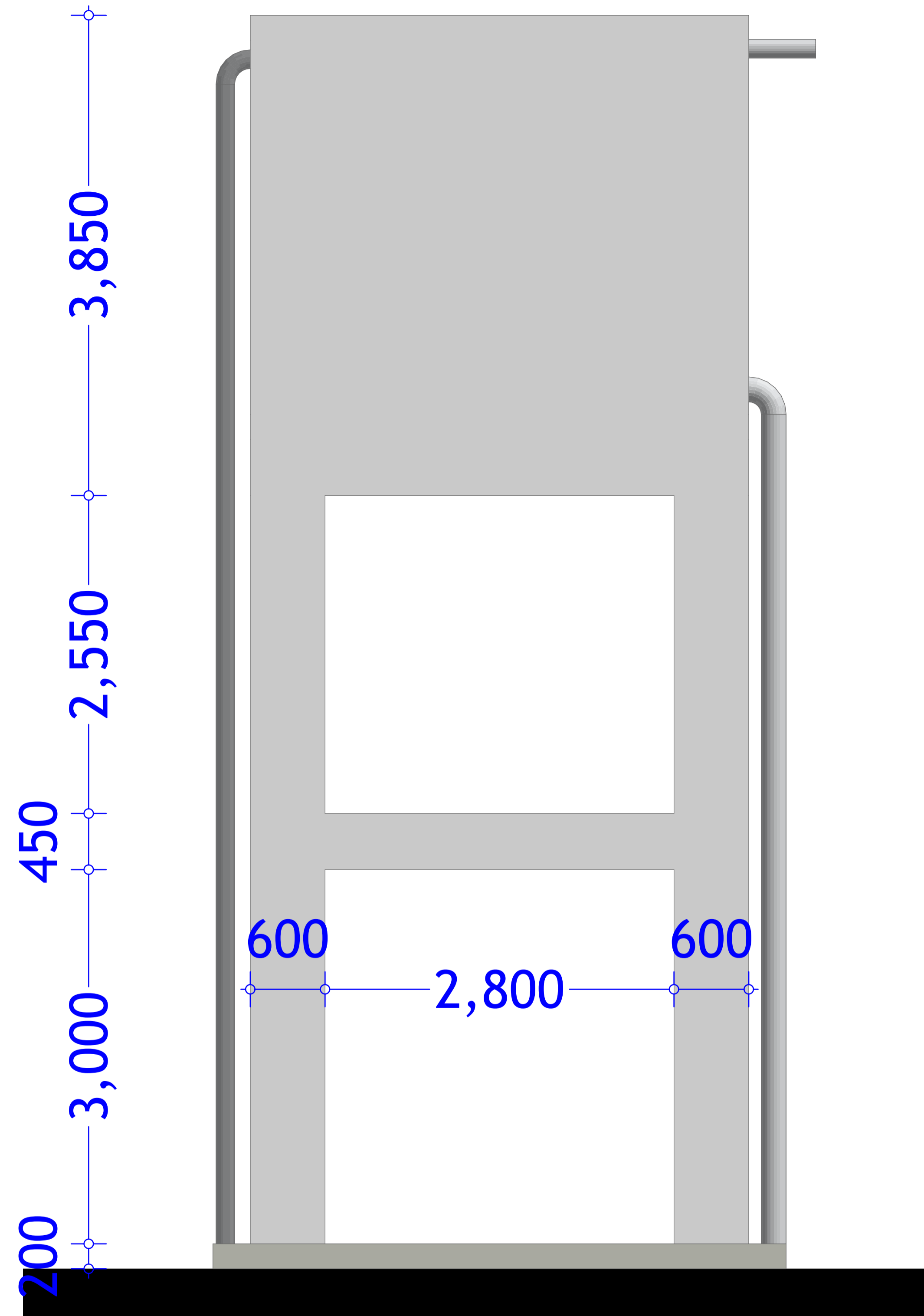
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
ELEVATIONS\_1

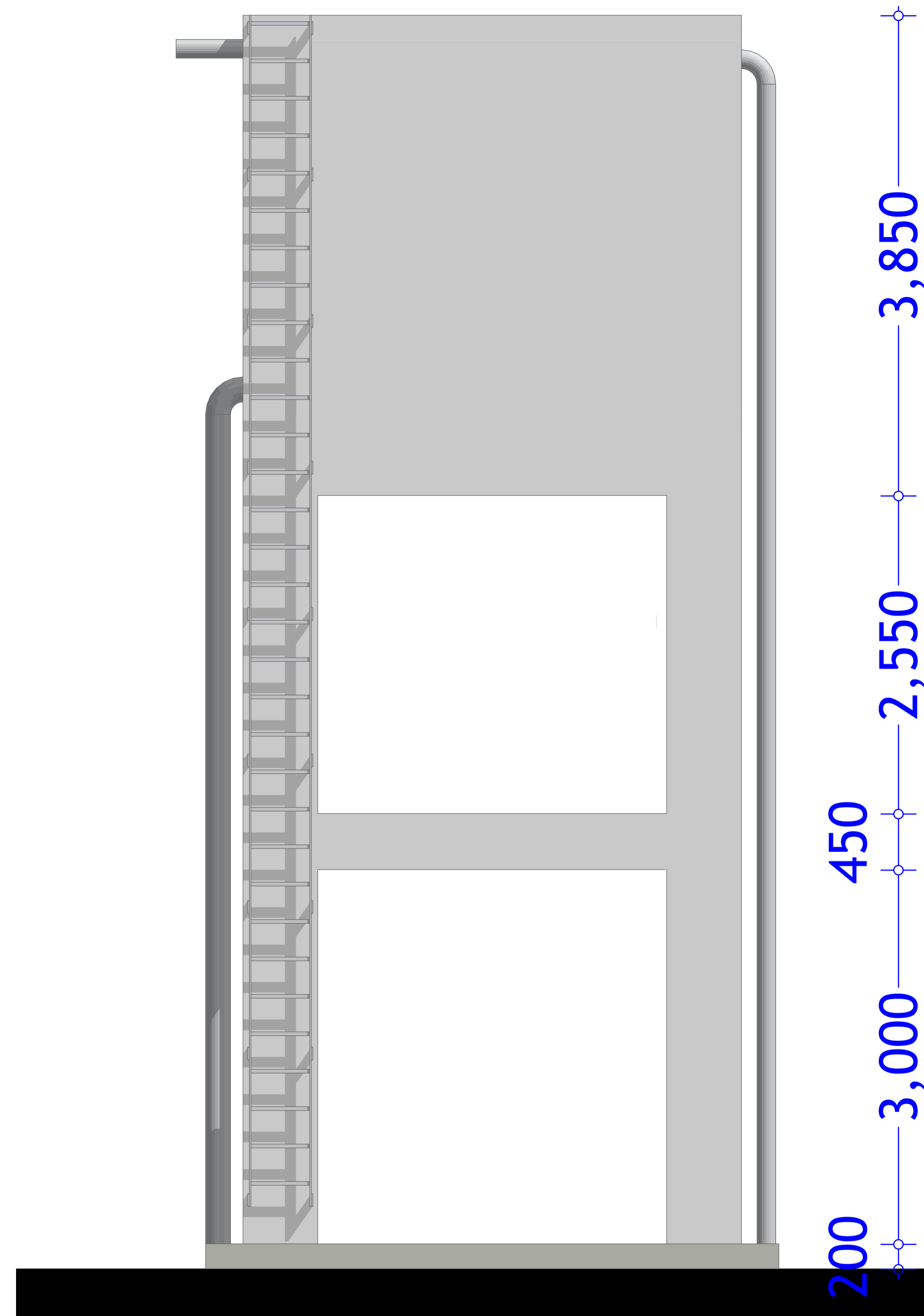
SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

WATER TANK

SHEET N<sup>o</sup>:  
07/32



West Elevation



East Elevation

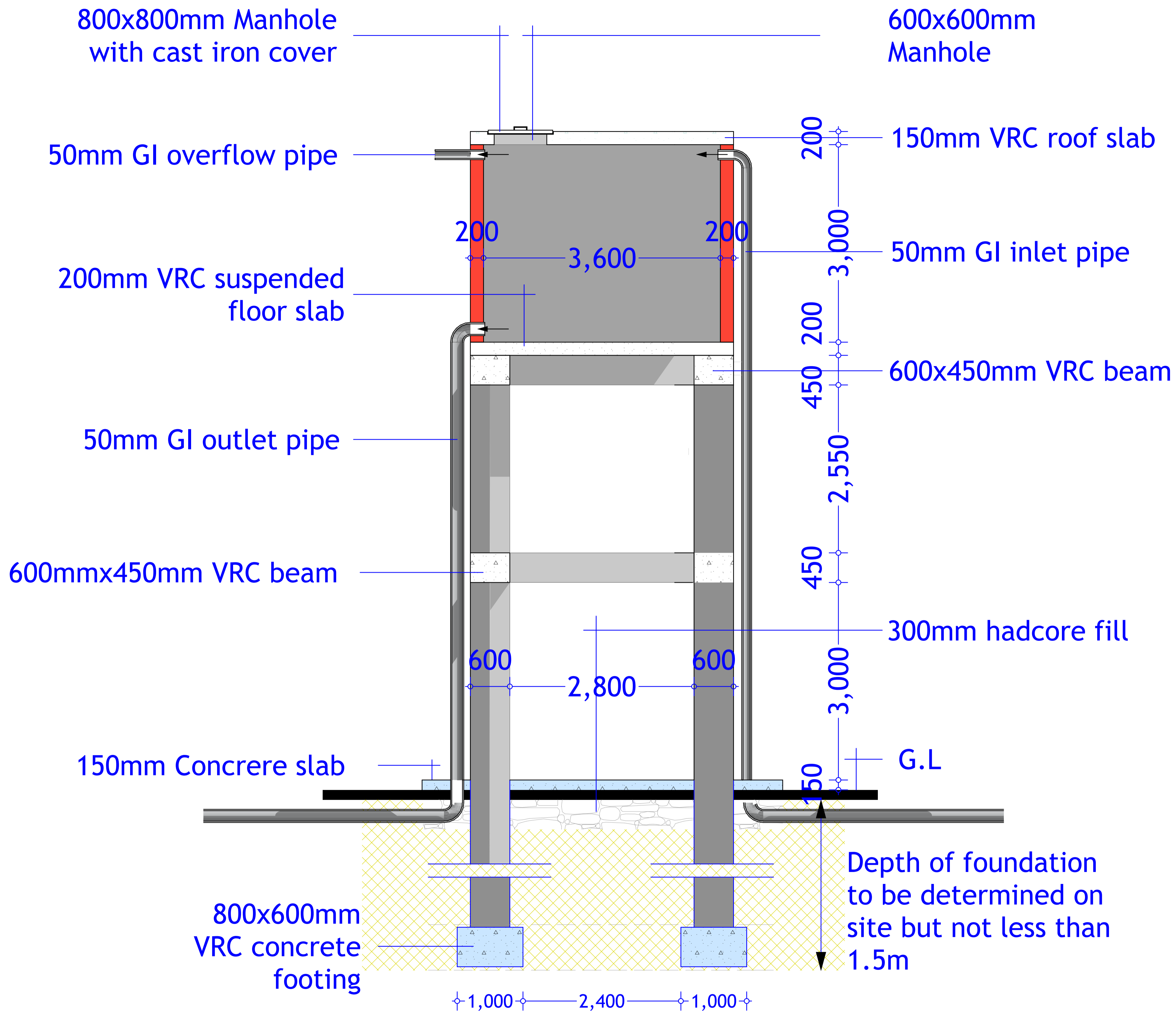
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
ELEVATIONS\_2

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

SHEET N<sup>o</sup>:  
**08 / 32**





## Sectional Elevation

PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

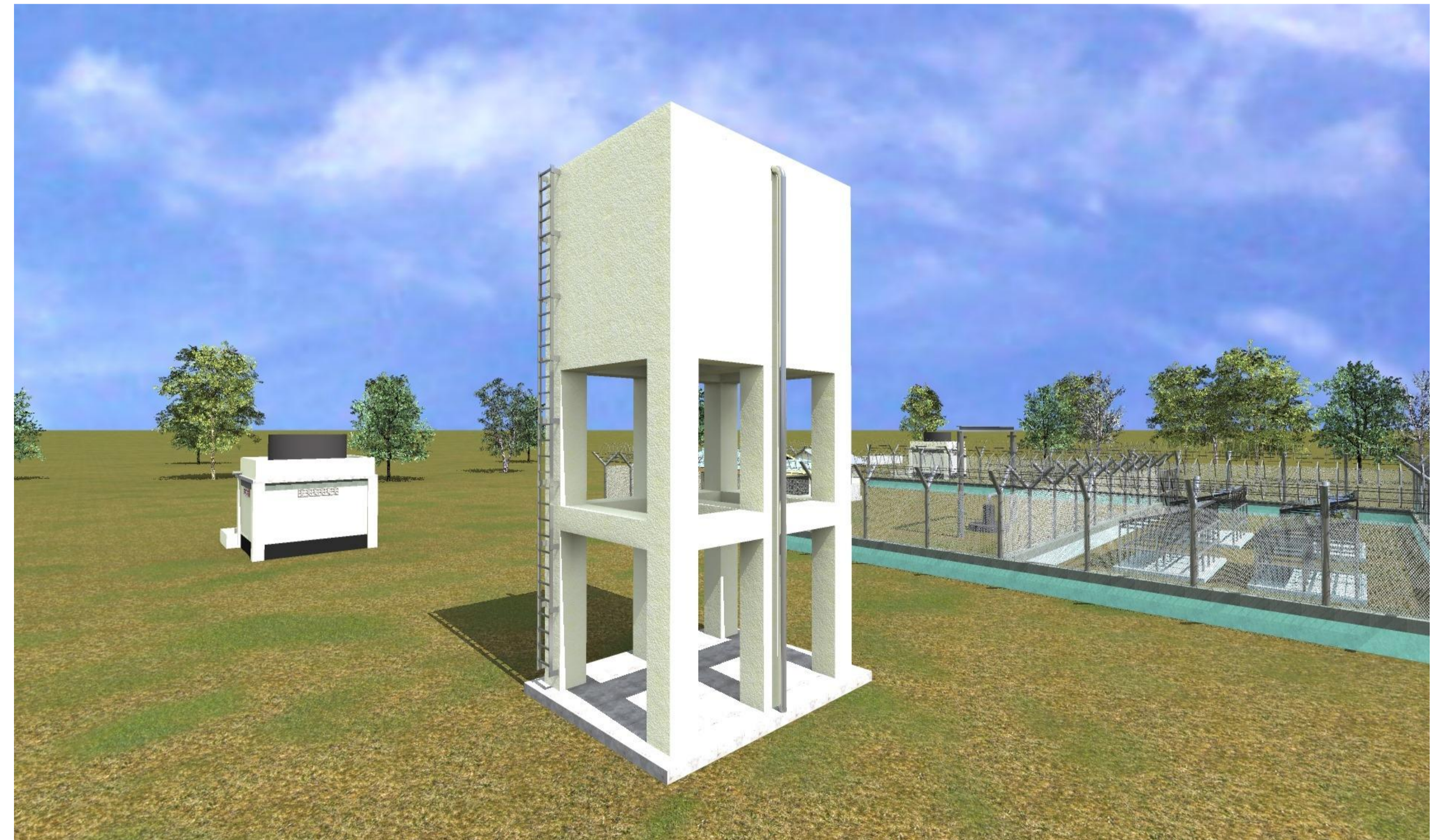
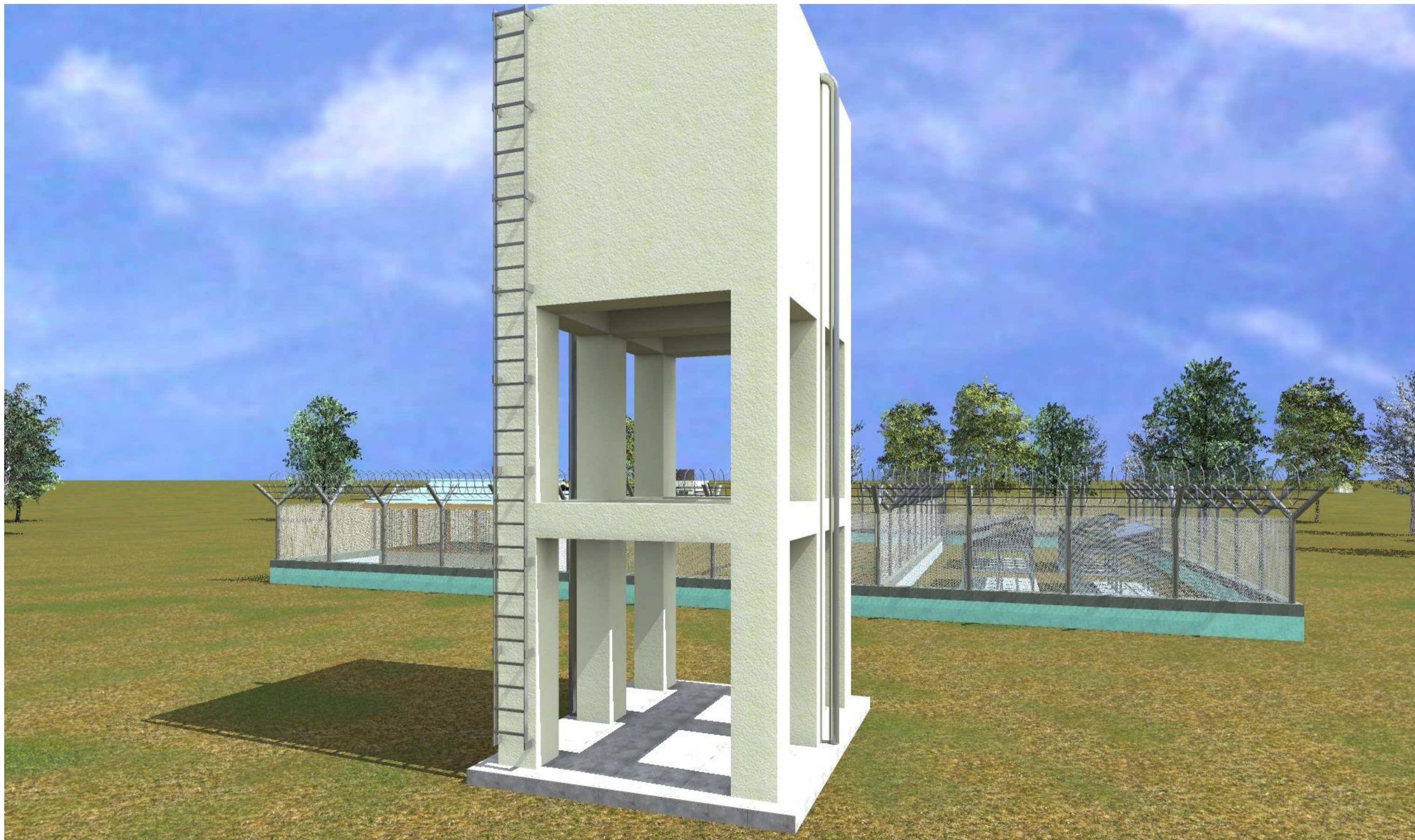
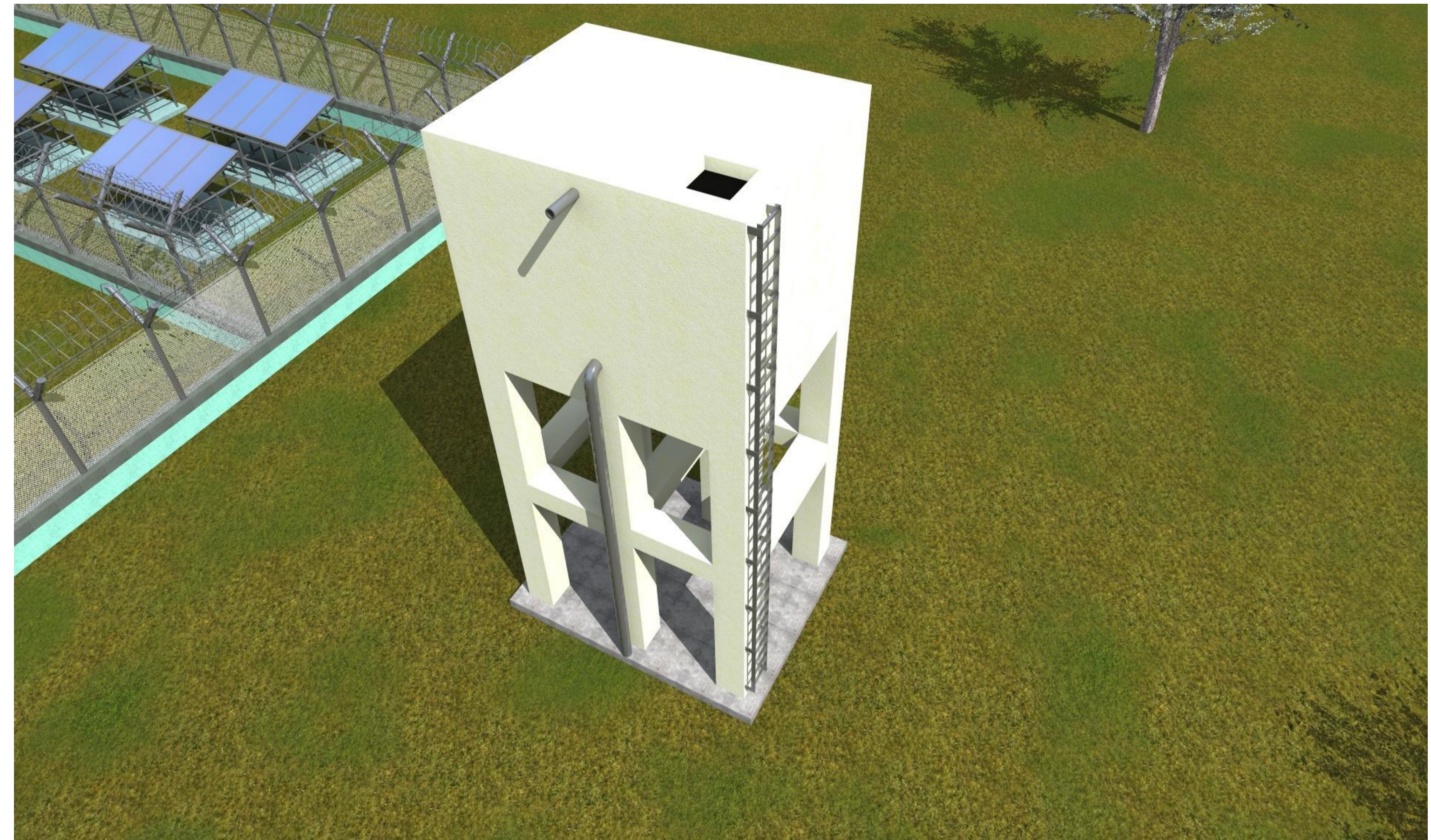
SHEET TITLE:  
SECTIONS

SCALE		DRAWING TITLE:
DATE	APRIL, 2017	
DESIGNED BY:	J. NANDWA	DRAWING N <sup>o</sup> :
DRAWN BY:	J. NANDWA	PROJECT N <sup>o</sup> :
REVIEWED BY:		
APPROVED BY:		

WATER TANK

SHEET N<sup>o</sup>:

09/32



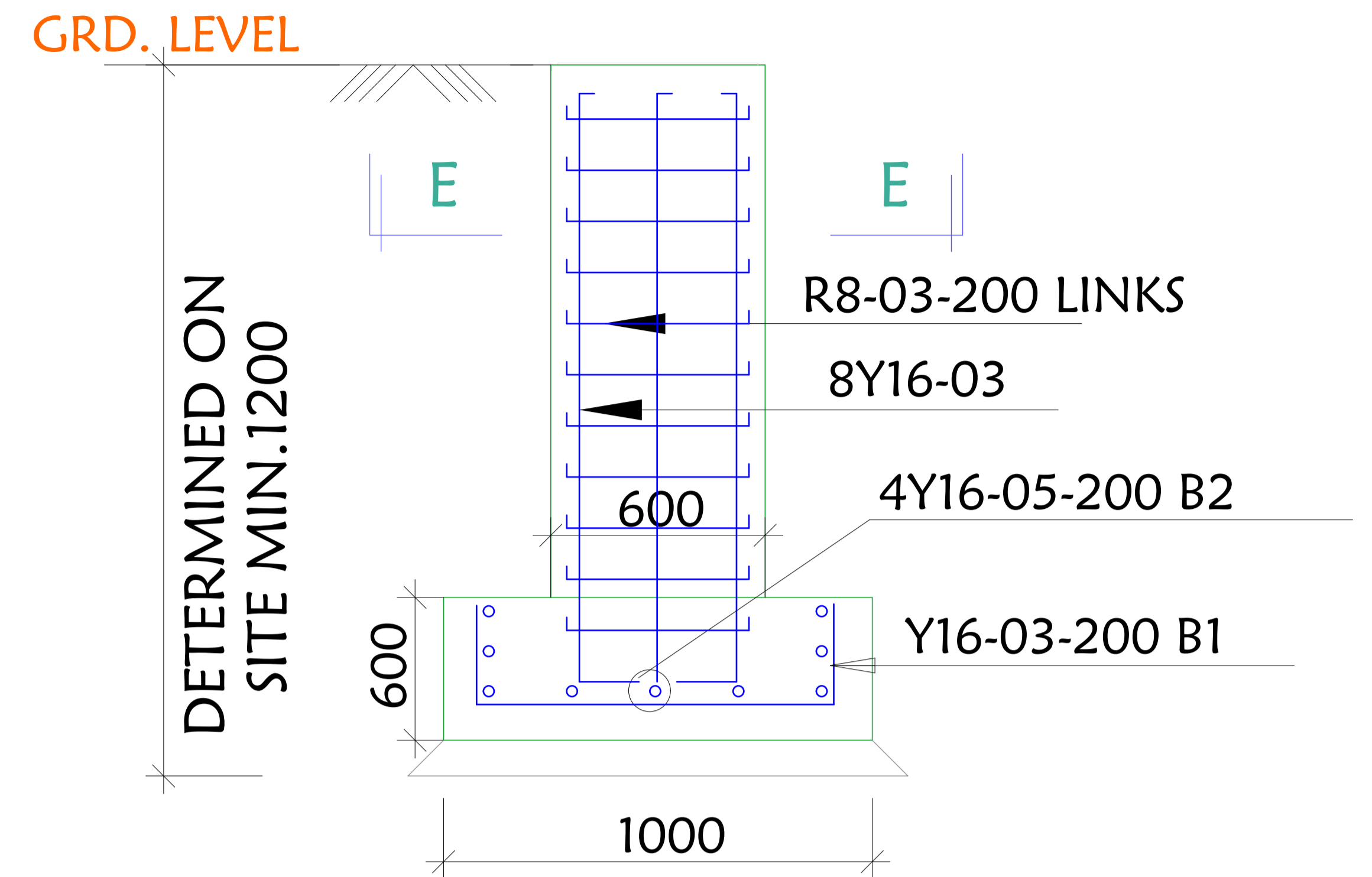
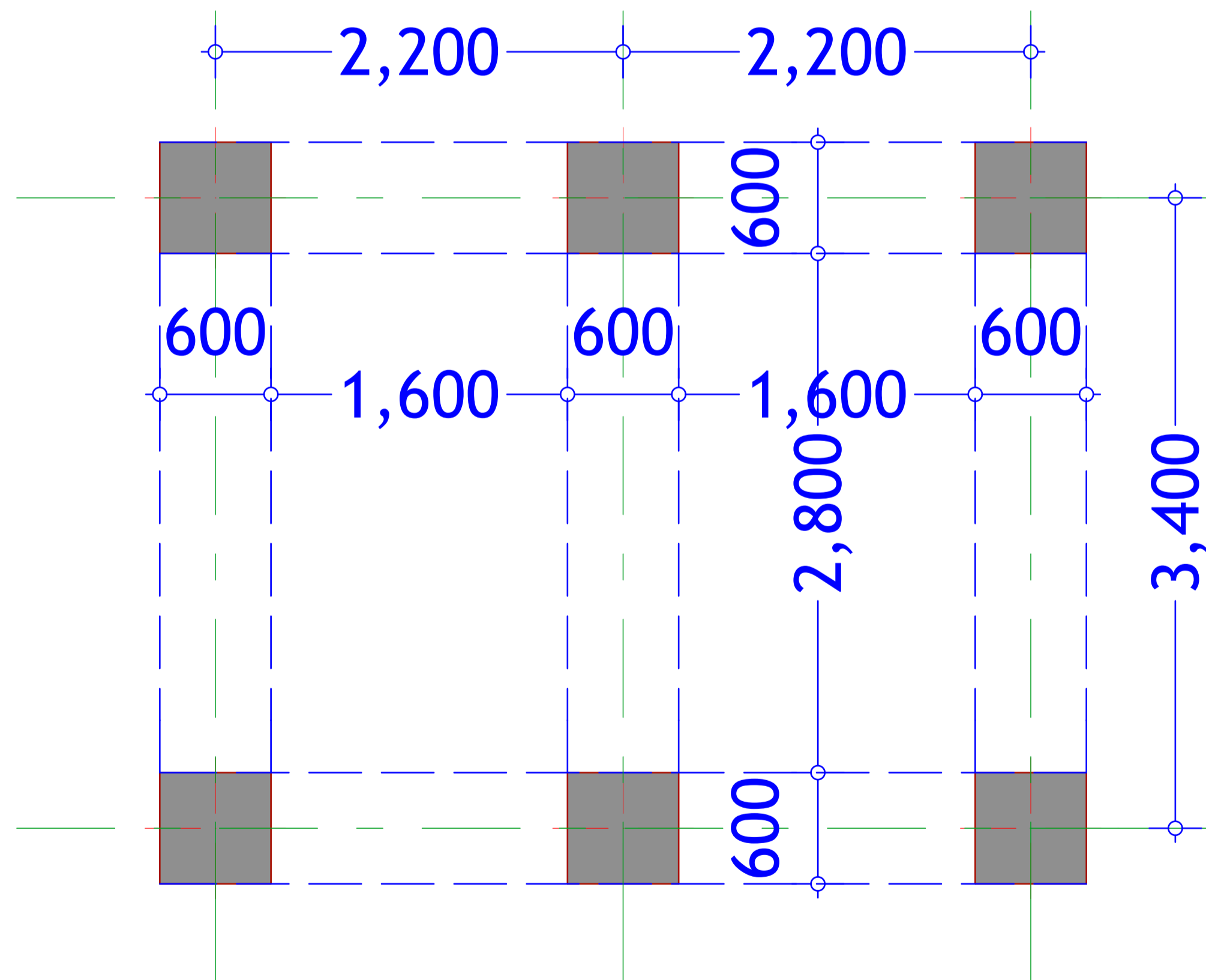
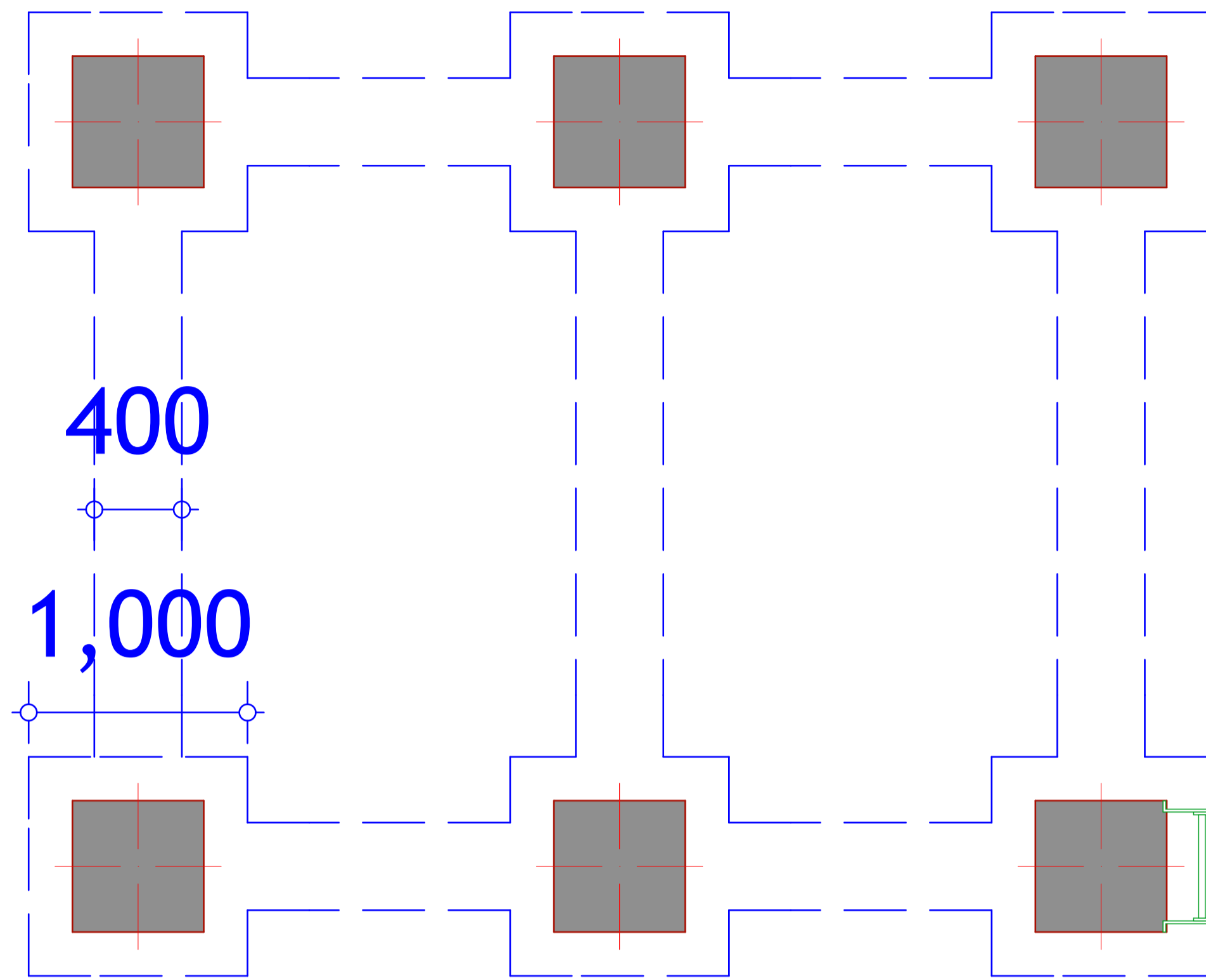
**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
3D PRESENTATION

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

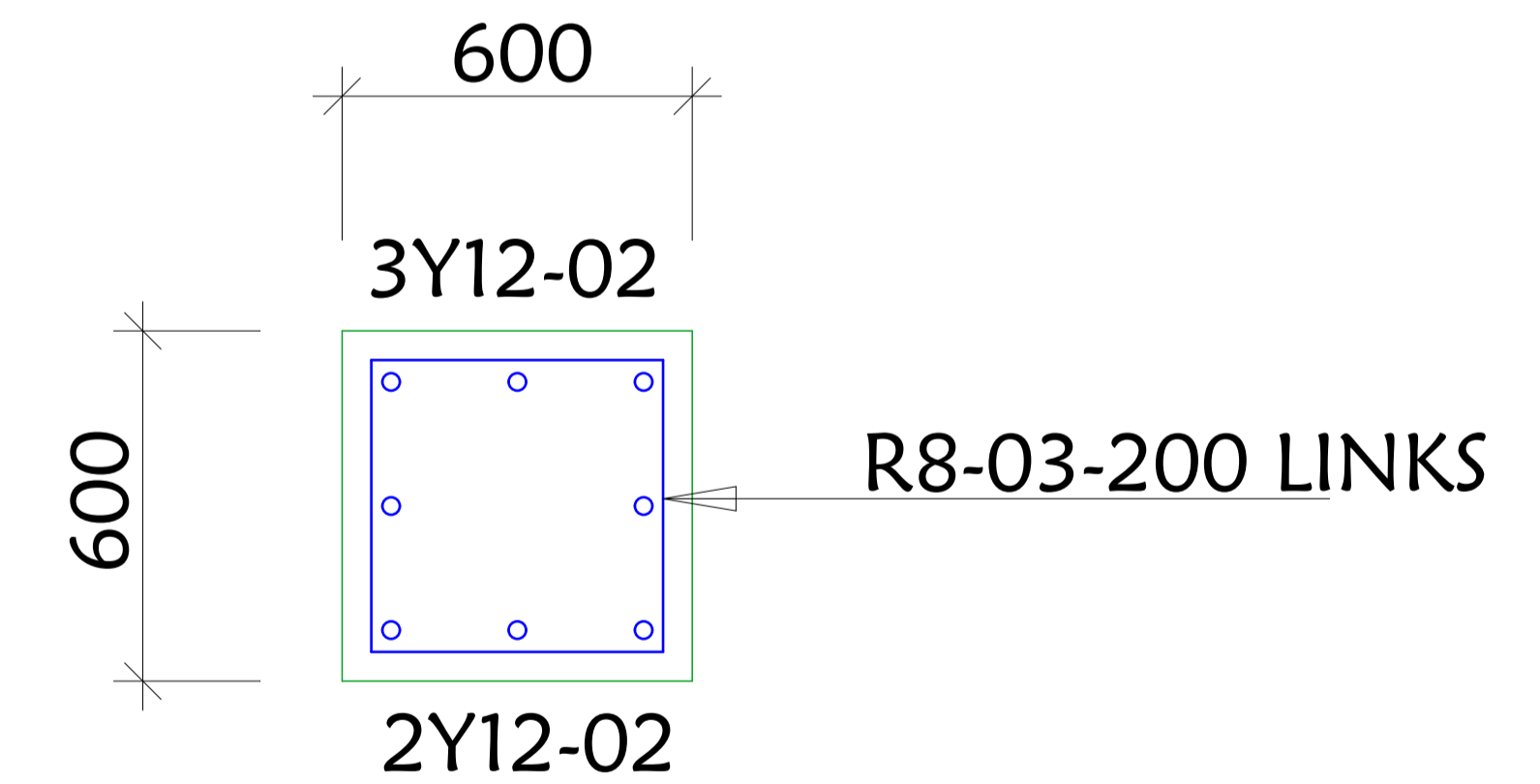
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<b>DRAWING N<sup>o</sup>:</b>	
<b>PROJECT N<sup>o</sup>:</b>	

**WATER TANK**  
SHEET N<sup>o</sup>:  
**10/32**



### SECTION D-D

SCALE 1:25



### SECTION E-E (Column)

SCALE 1:25

PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

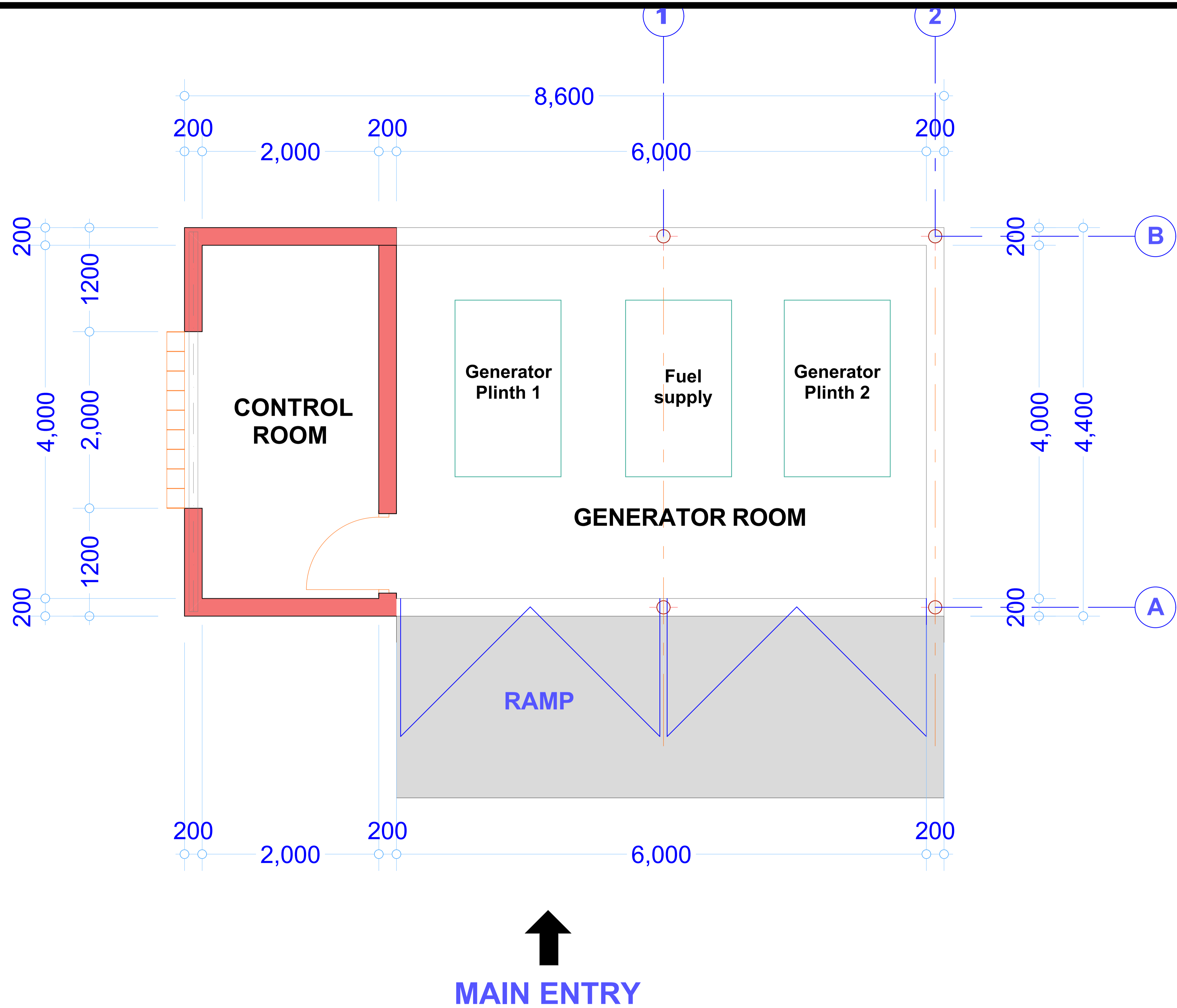
SHEET TITLE:  
STRUCT. DETAIL (Foundation)

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

WATER TANK

SHEET N<sup>o</sup>:

11/32



PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

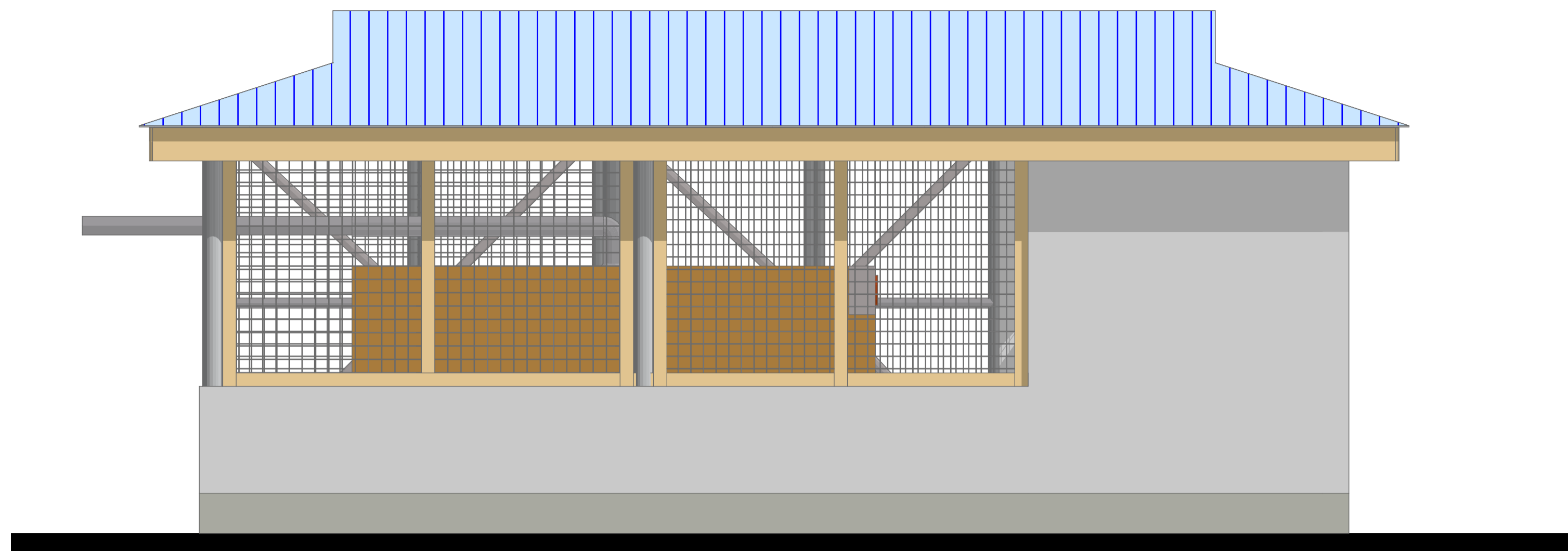
SHEET TITLE:  
FLOOR LAYOUT

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

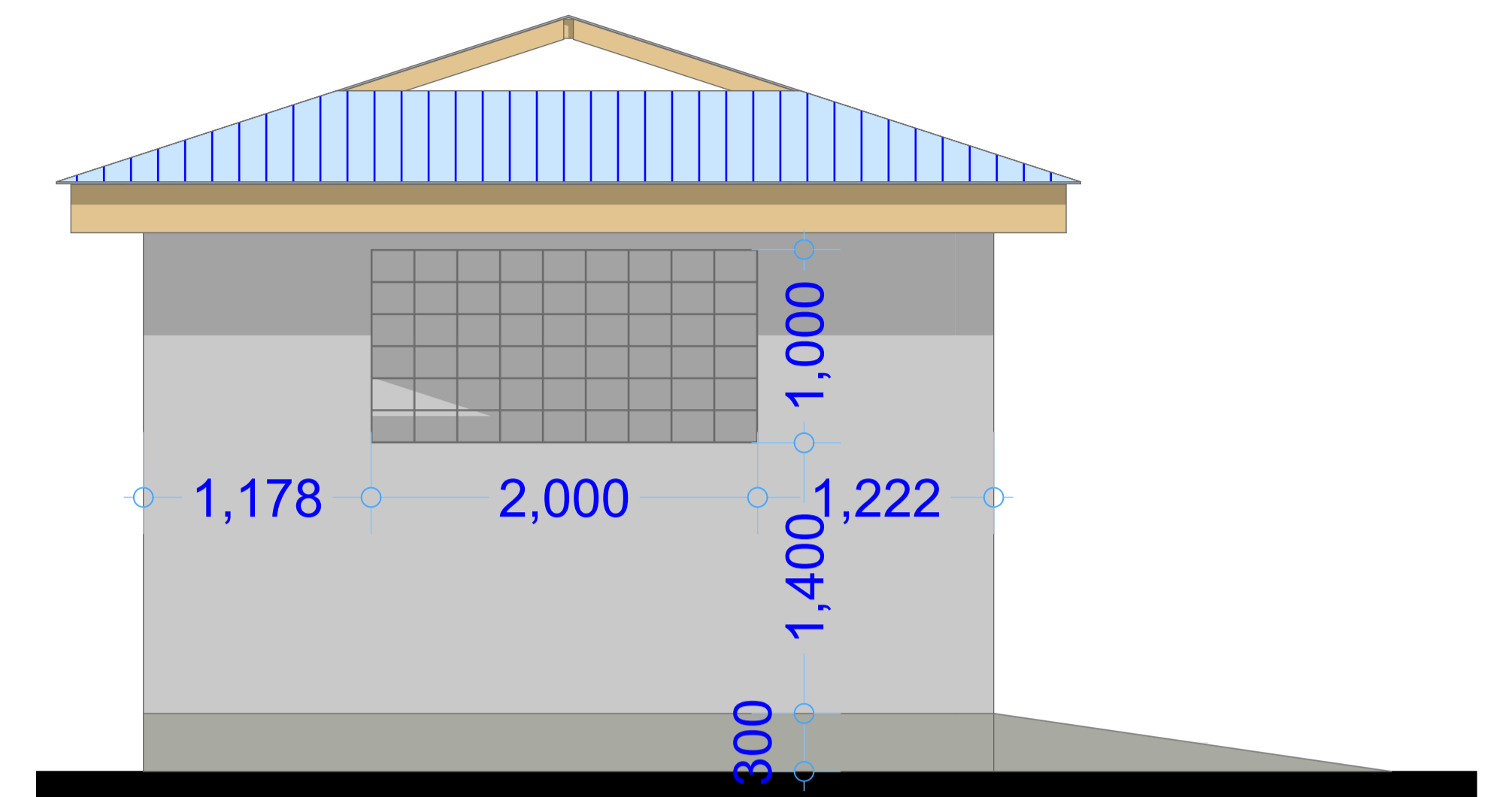
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DRAWING N <sup>o</sup> :	
PROJECT N <sup>o</sup> :	

GENERATOR SHED

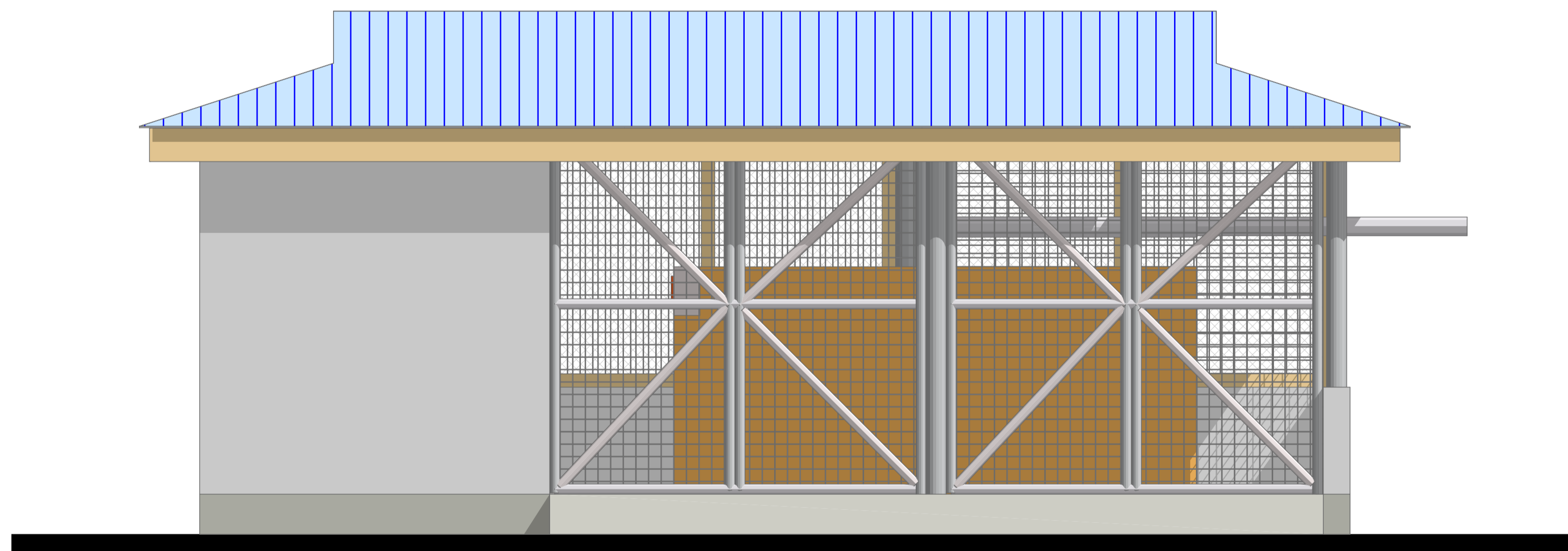
SHEET N<sup>o</sup>:  
**12/32**



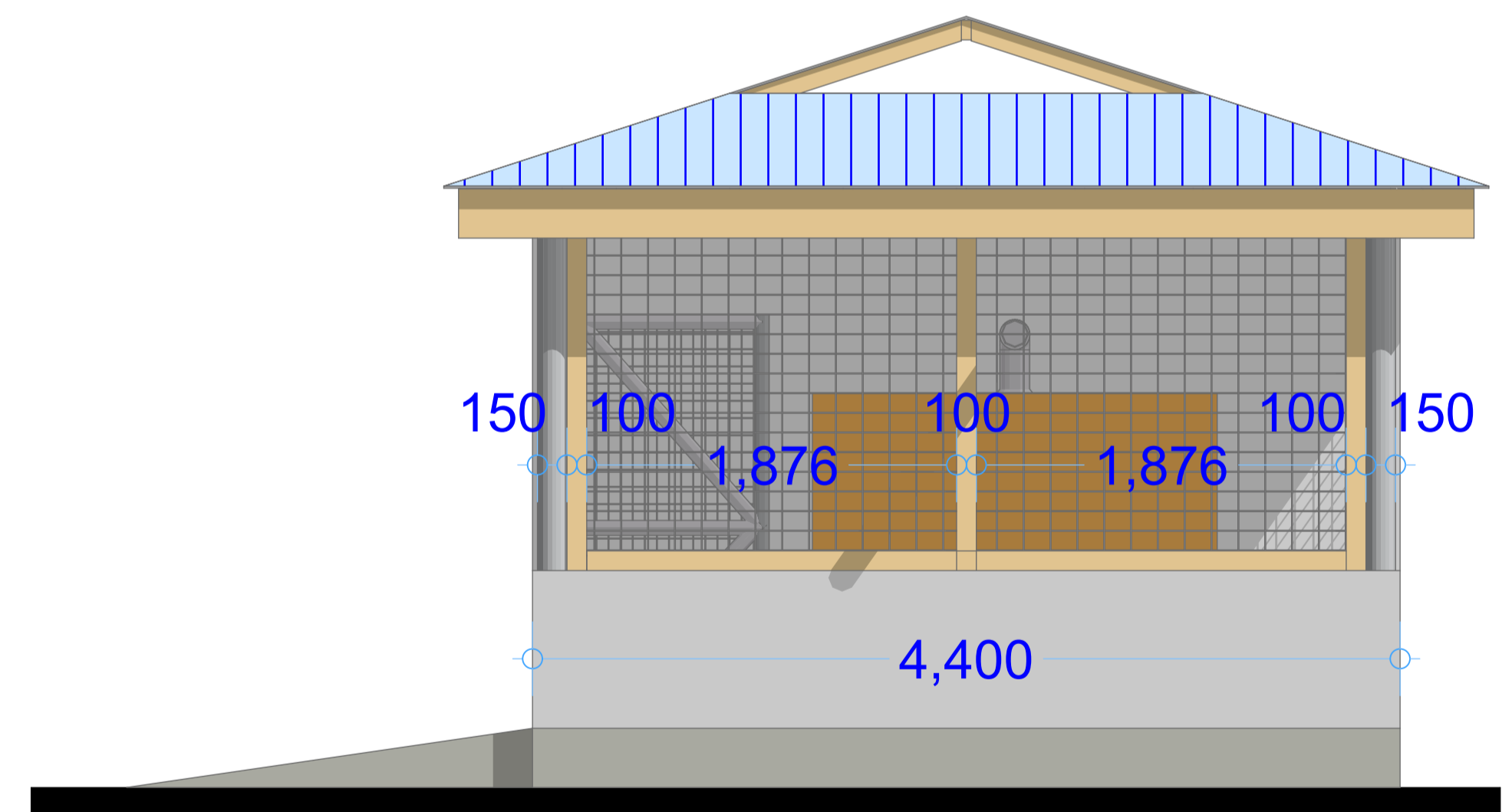
**SOUTH ELEVATION**



**EAST ELEVATION**



**NORTH ELEVATION**



**WEST ELEVATION**

PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
**ELEVATIONS**

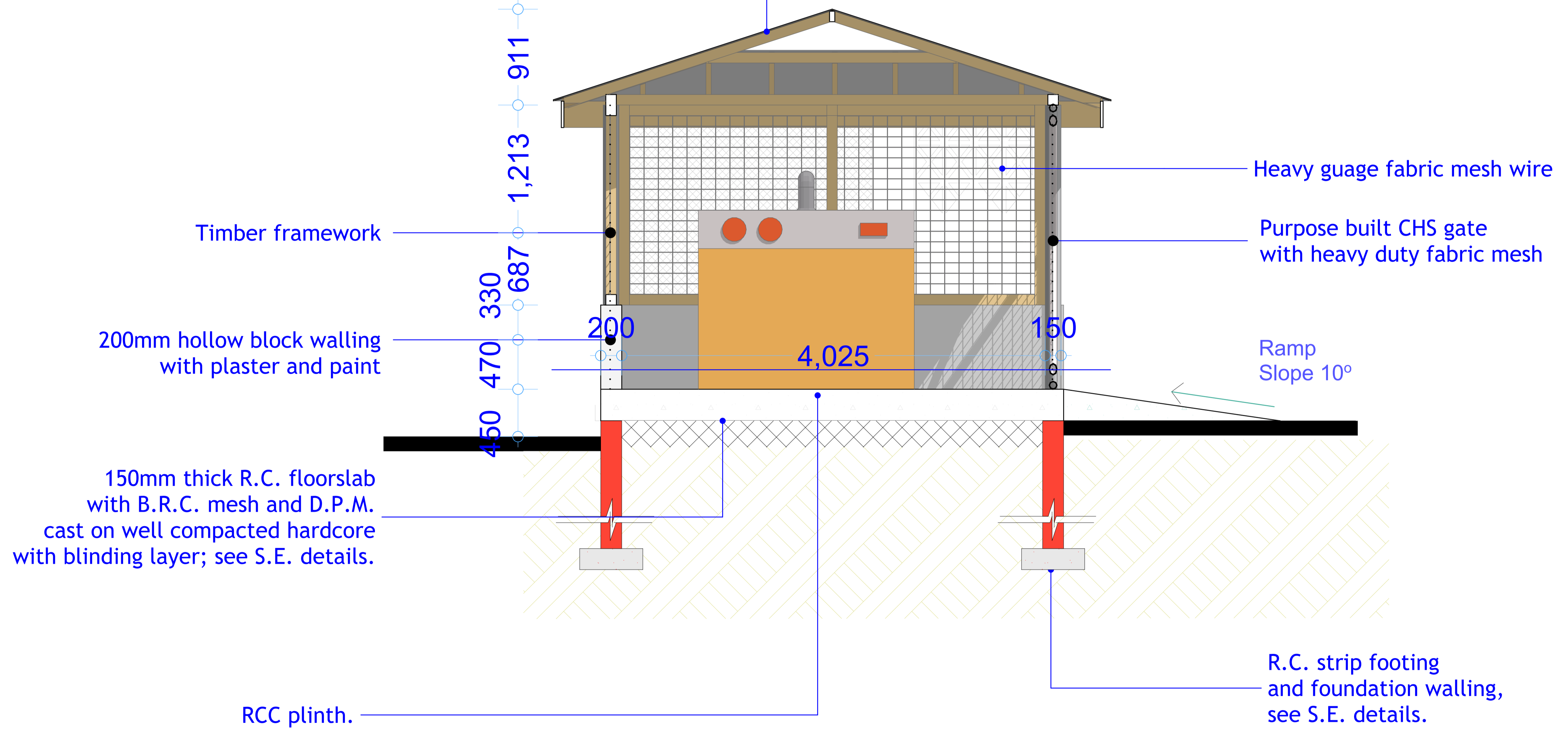
SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

DRAWING TITLE:  
DRAWING N<sup>o</sup>:  
PROJECT N<sup>o</sup>:

**GENERATOR SHED**

SHEET N<sup>o</sup>:  
**13/32**

Gauge 28 prepainted iron resincot roofing sheets: IT4 box profile, nailed on sawn hardwood structure.  
 Roof pitch=22°.  
 For structure; see S.E. details.

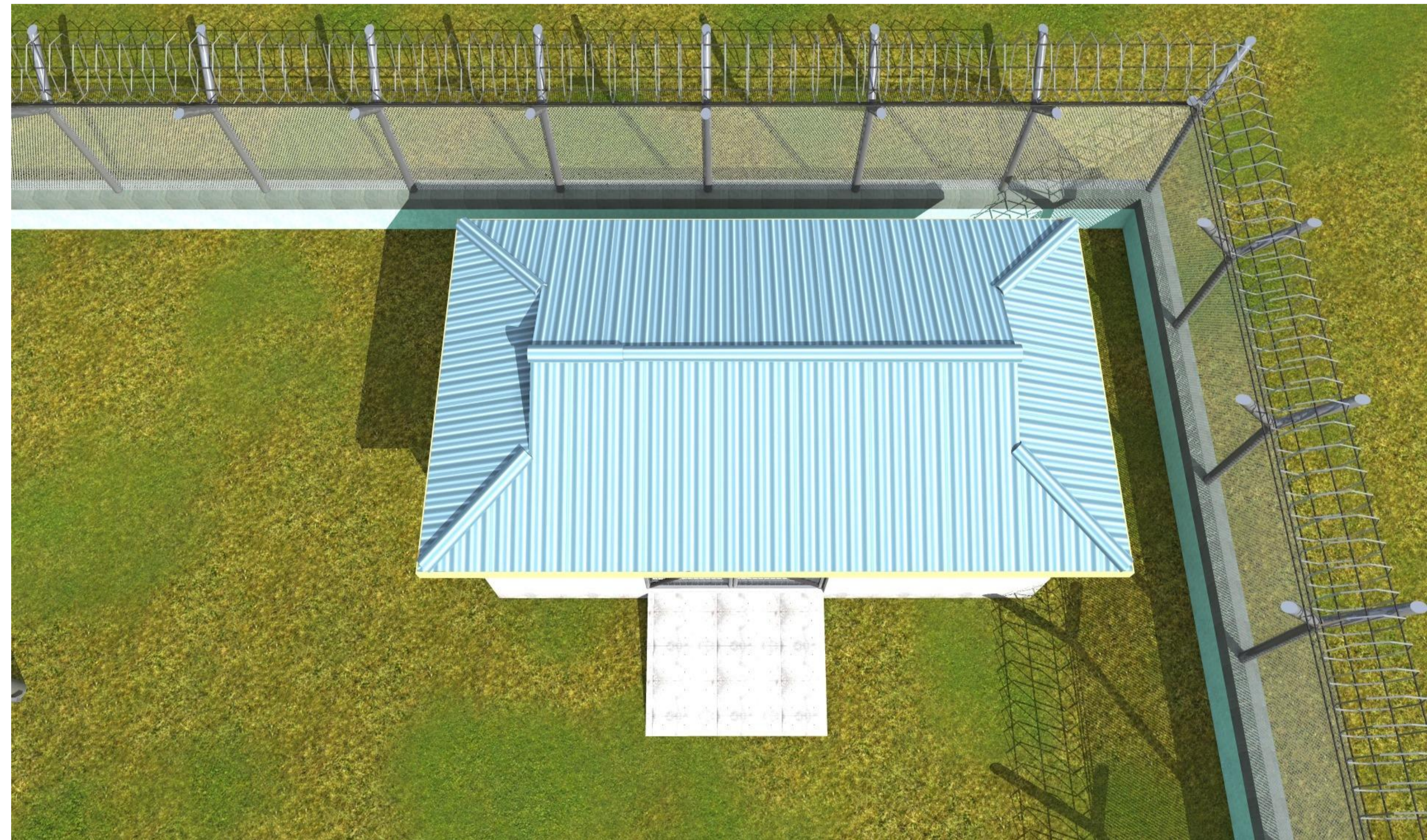


PROJECT. PROPOSED BALANBAL BOREHOLE  
 REHABILITATION  
 -BALANBAL DISTRICT-

SHEET TITLE:  
 SECTIONS

SCALE		DRAWING TITLE:	GENERATOR SHED
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

SHEET N<sup>o</sup>:  
 14/32



**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

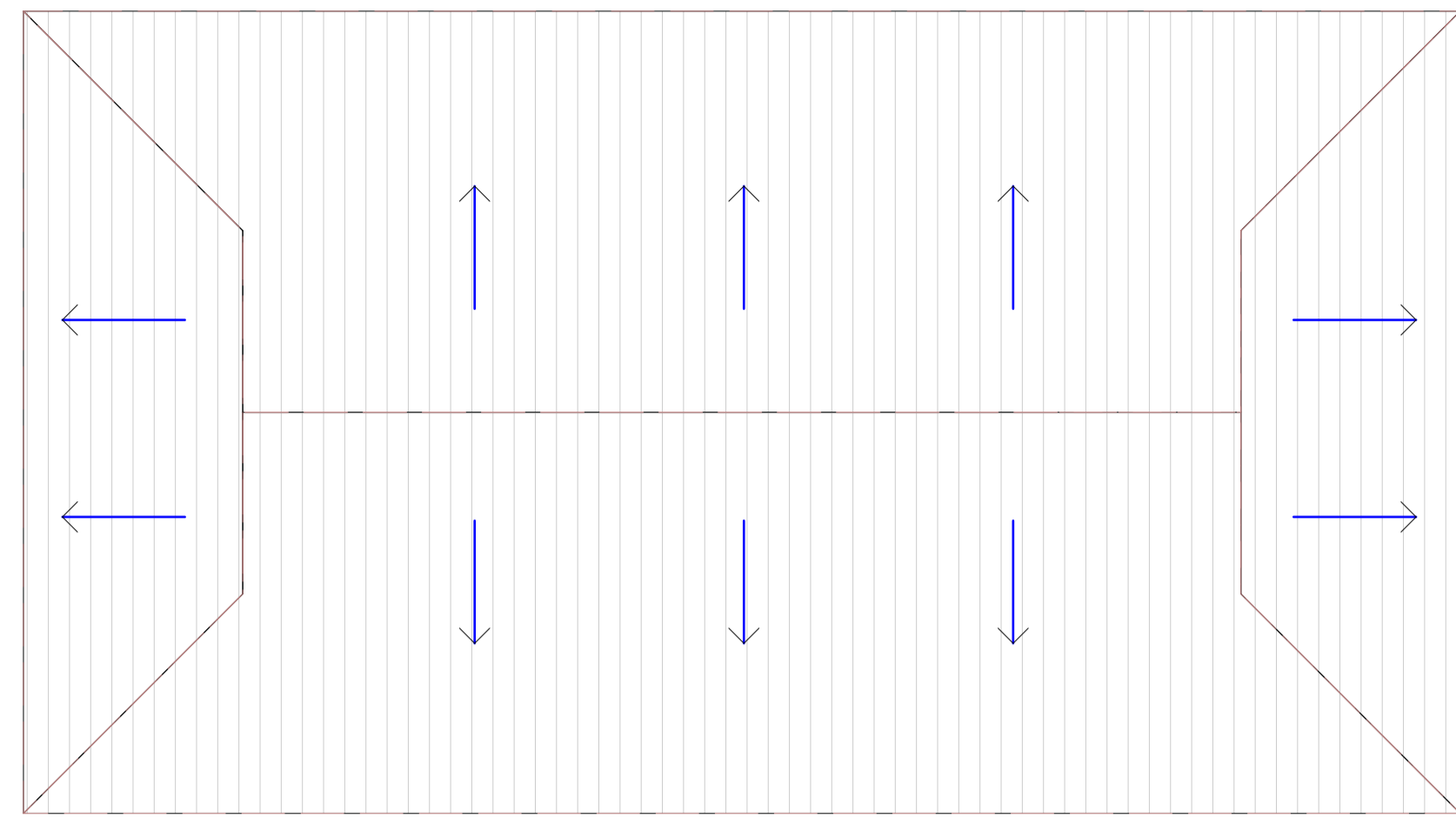
**SHEET TITLE:**  
3D PRESENTATION

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

**DRAWING TITLE:**  
DRAWING N<sup>o</sup>:  
PROJECT N<sup>o</sup>:

**GENERATOR SHED**

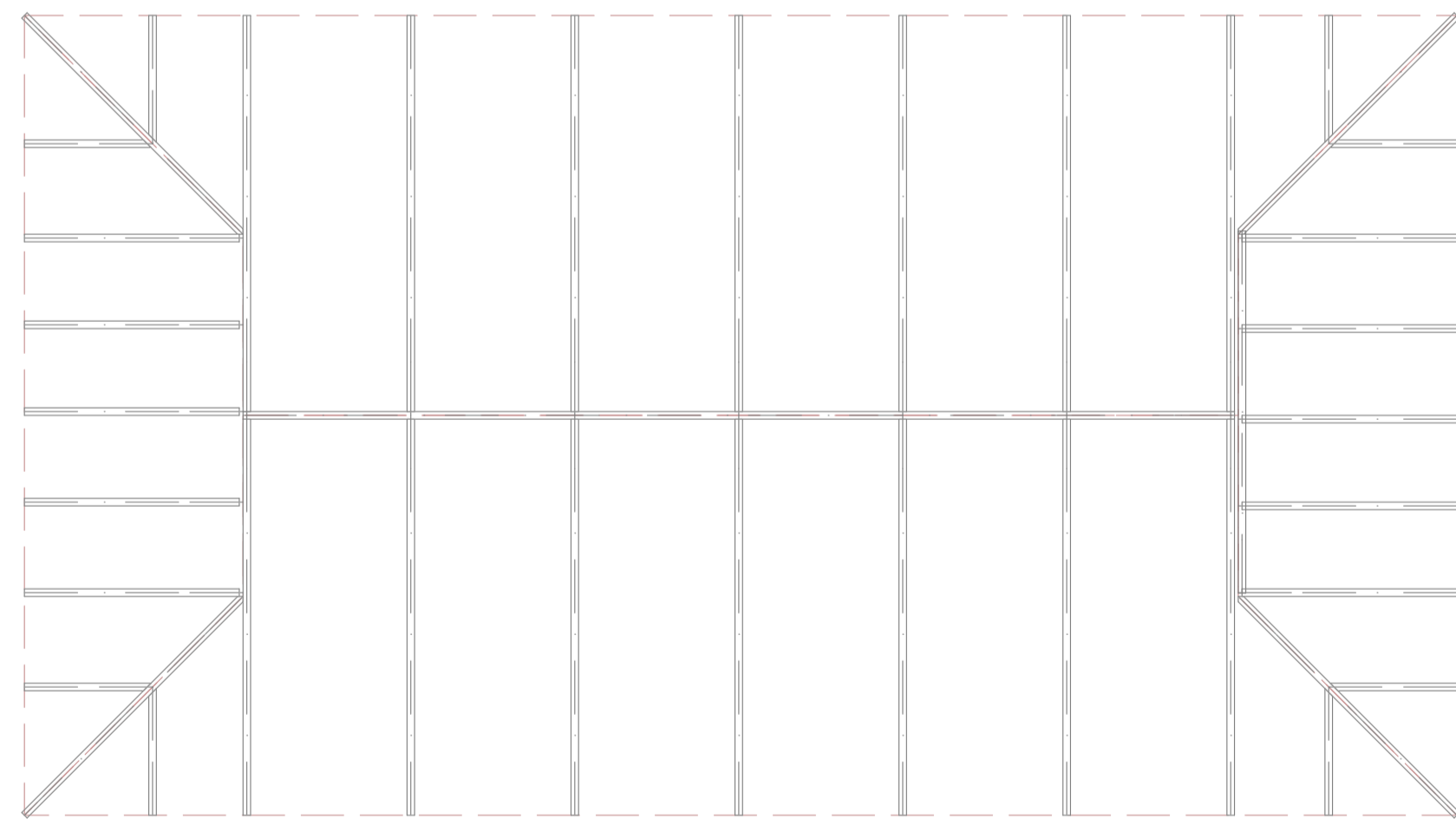
SHEET N<sup>o</sup>:  
**15/32**



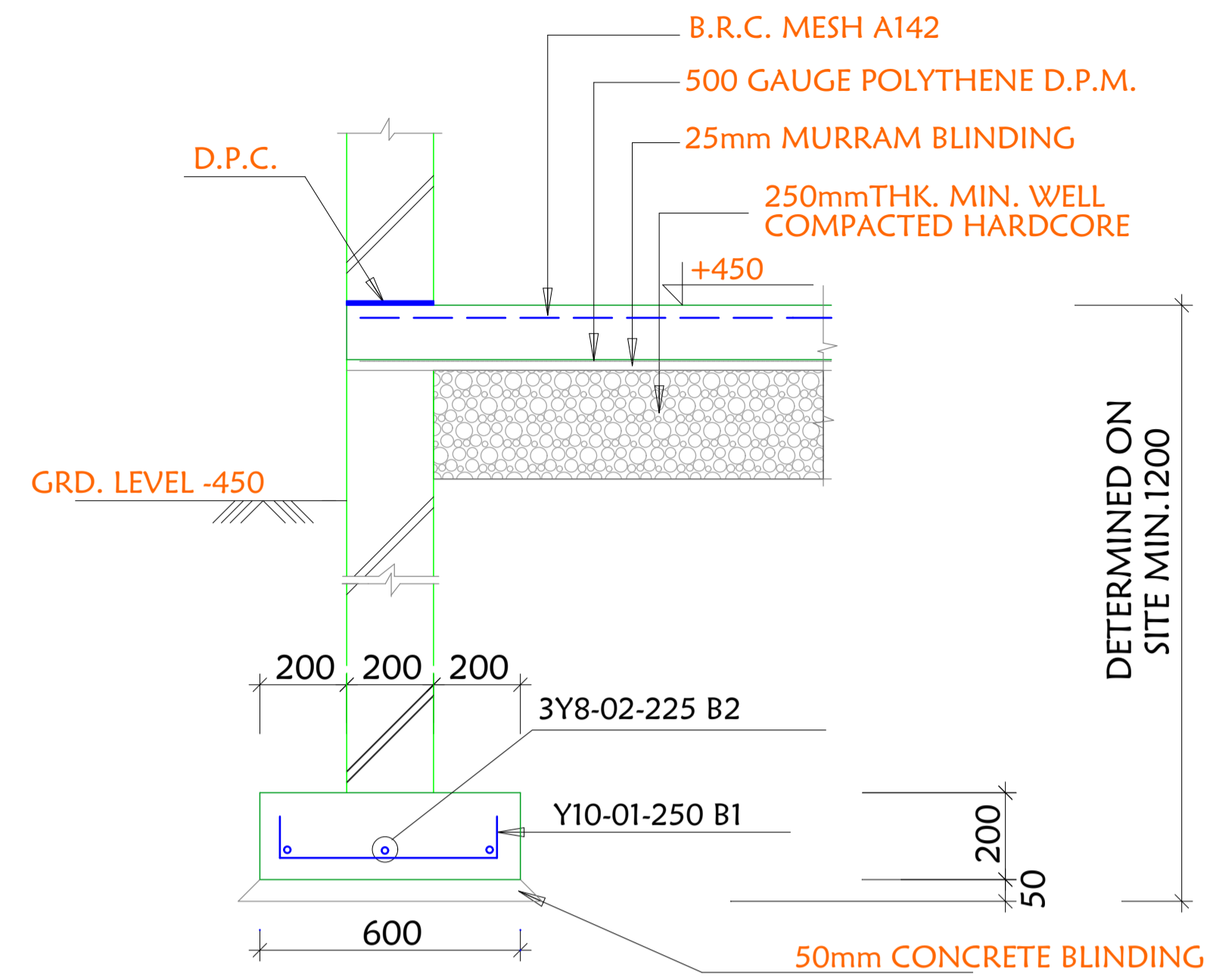
## ROOF PLAN

### Legend

→ Direction of fall

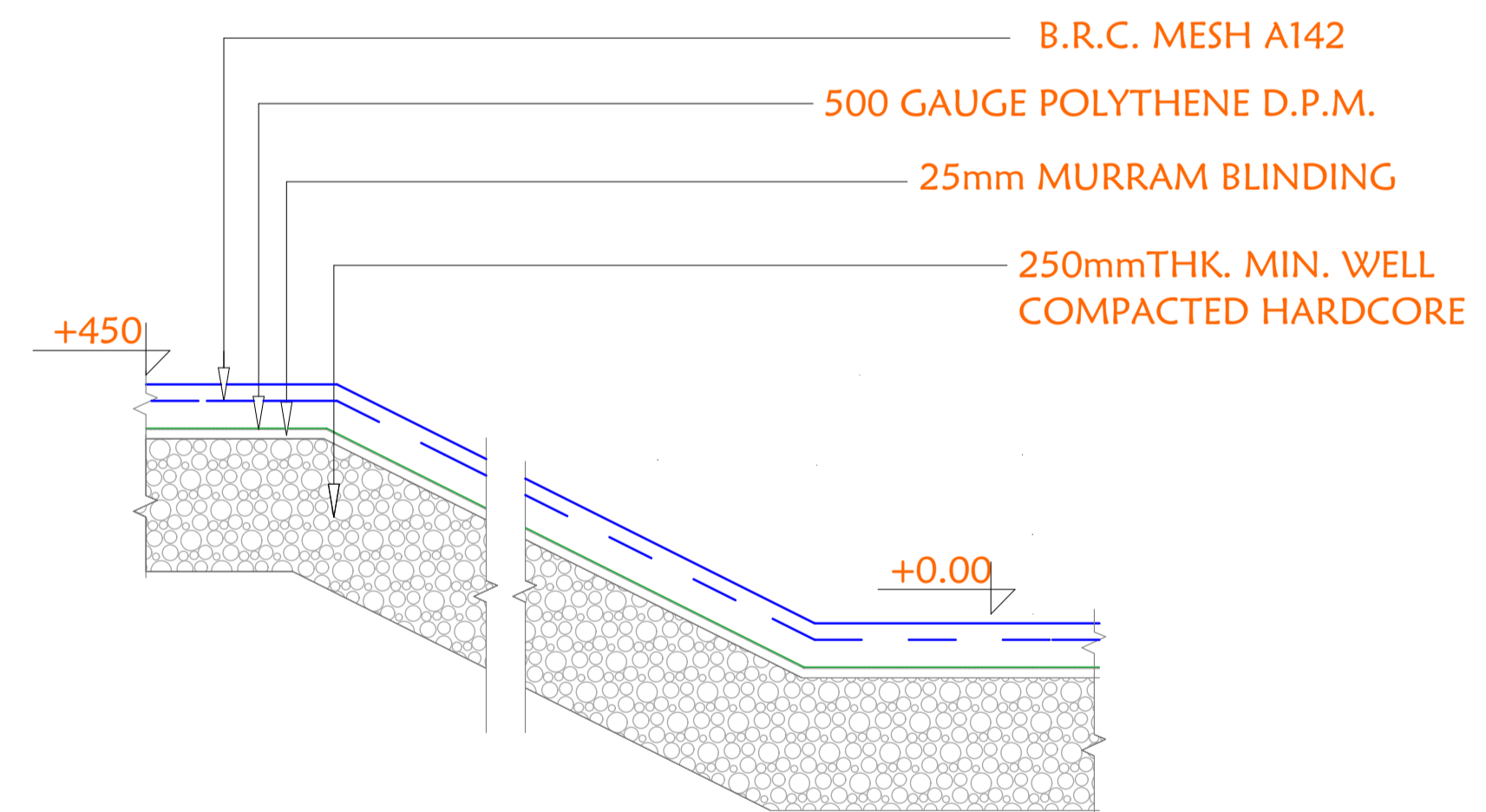


## TRUSS LAYOUT



### SECTION A-A SCALE 1:25

## FOUNDATION FOOTING DETAIL



### SECTION D-D SCALE 1:25

## RAMP DETAILS

PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
**STRUCT. DETAIL (Foundation)**

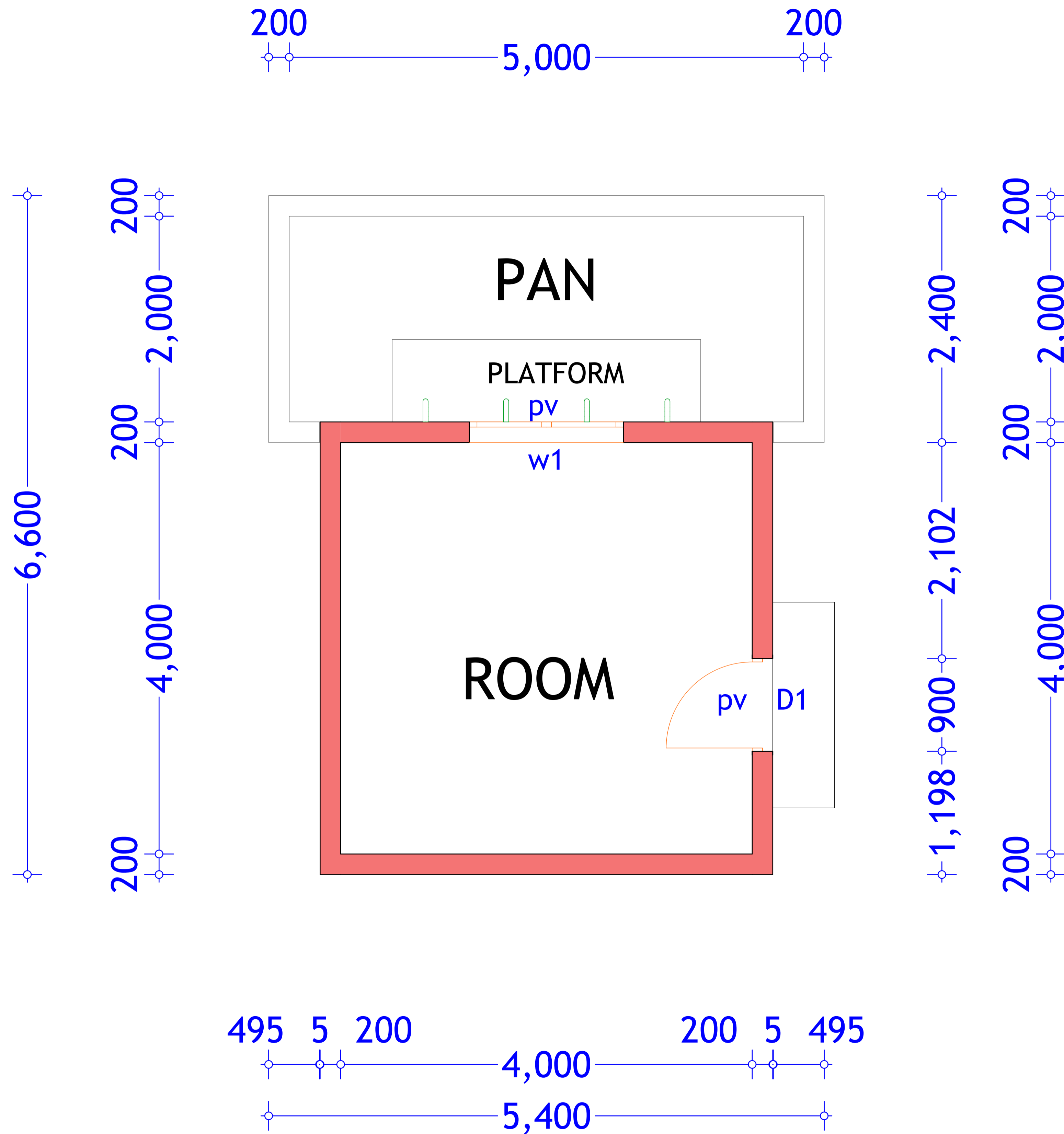
SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

GENERATOR SHED

SHEET N<sup>o</sup>:

16/32





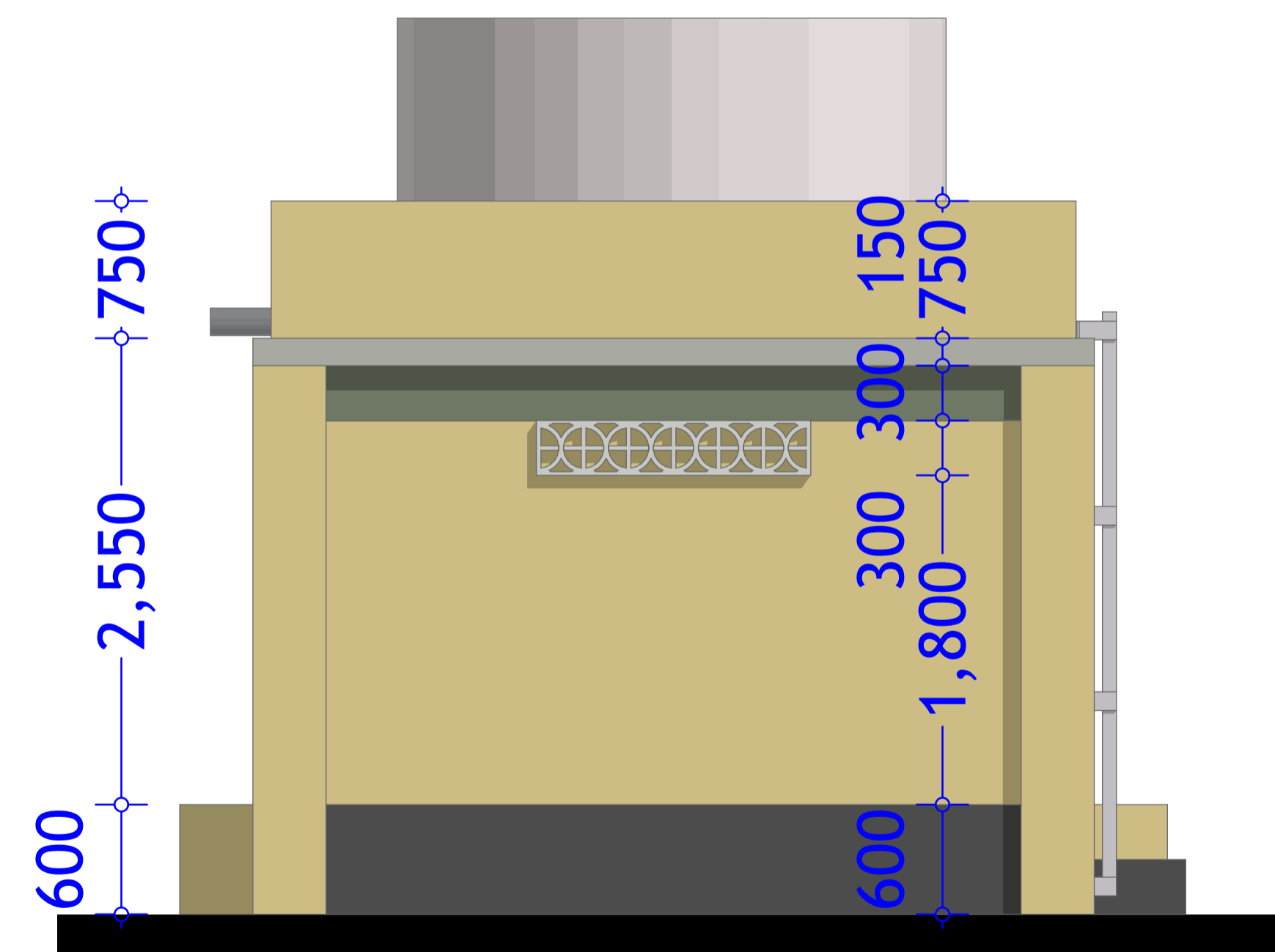
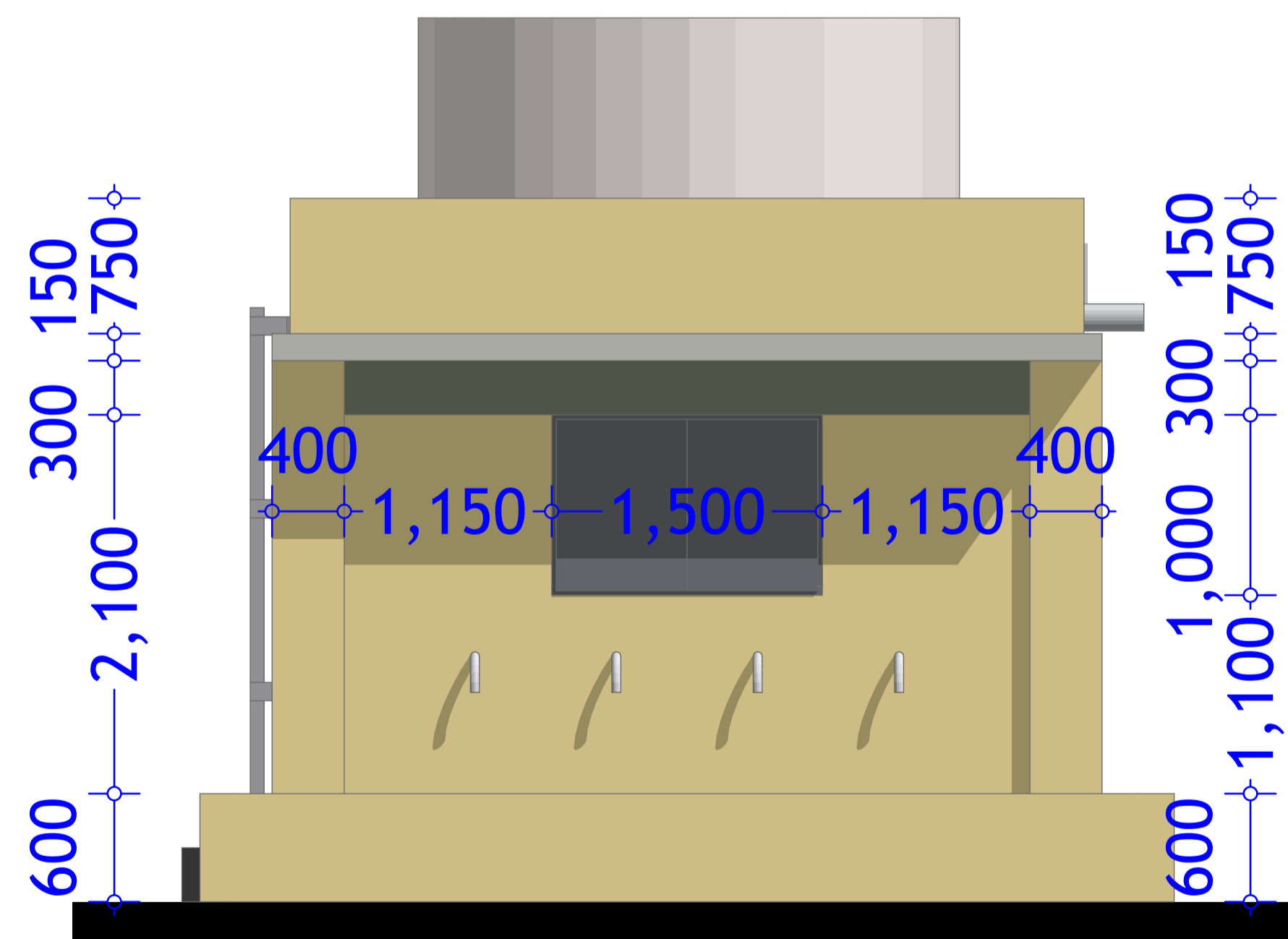
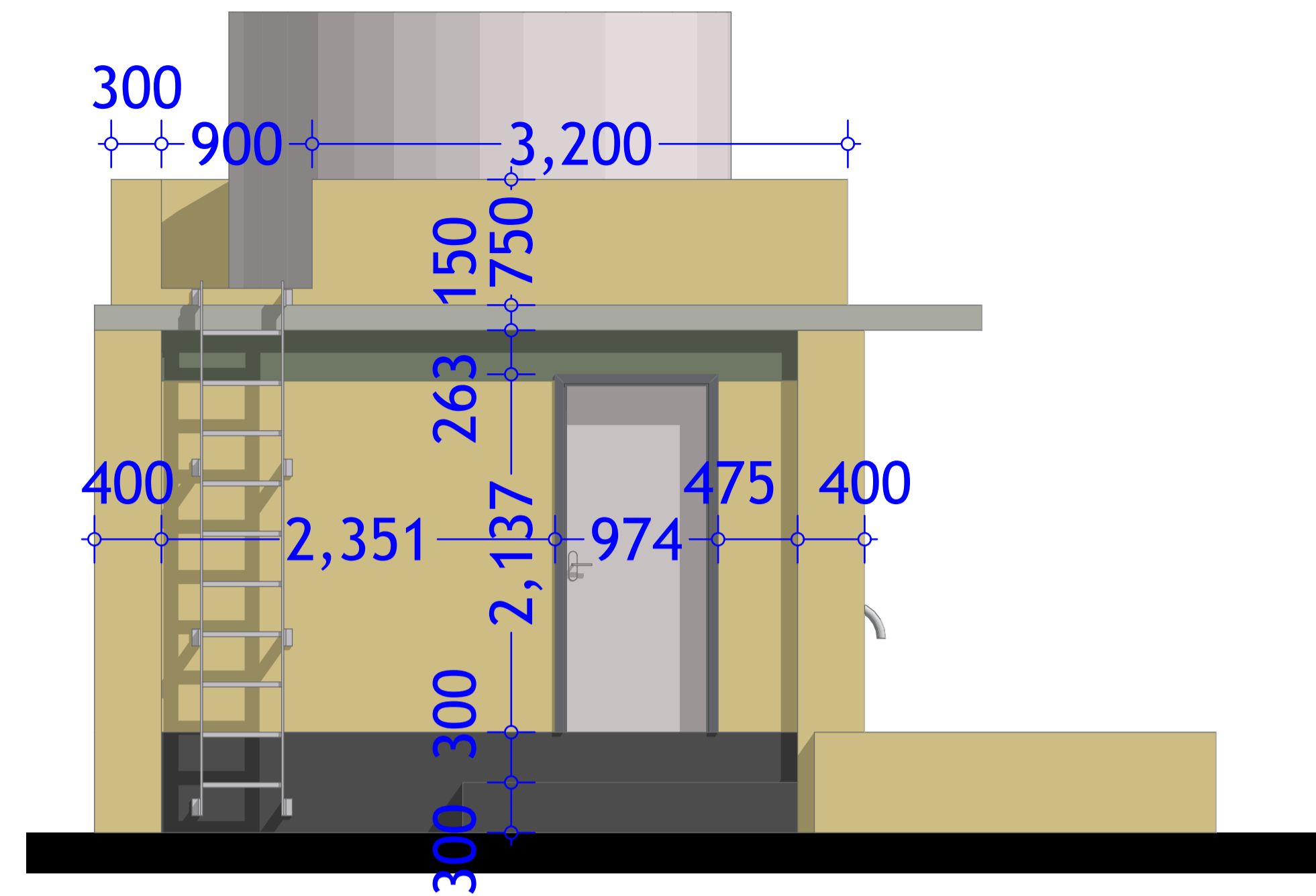
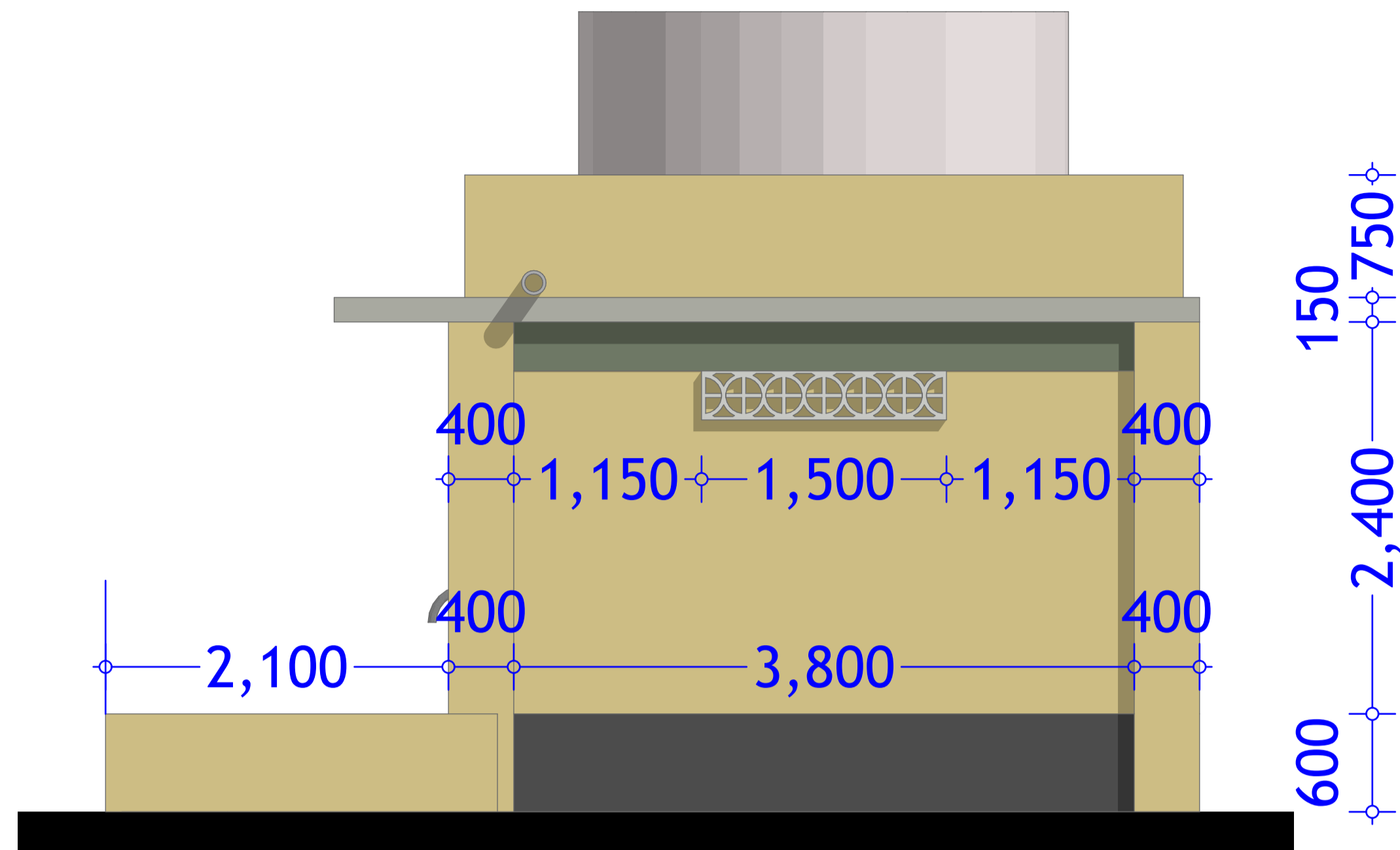
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
FLOOR LAYOUT

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

WATER KIOSK

SHEET N<sup>o</sup>:  
**17/32**



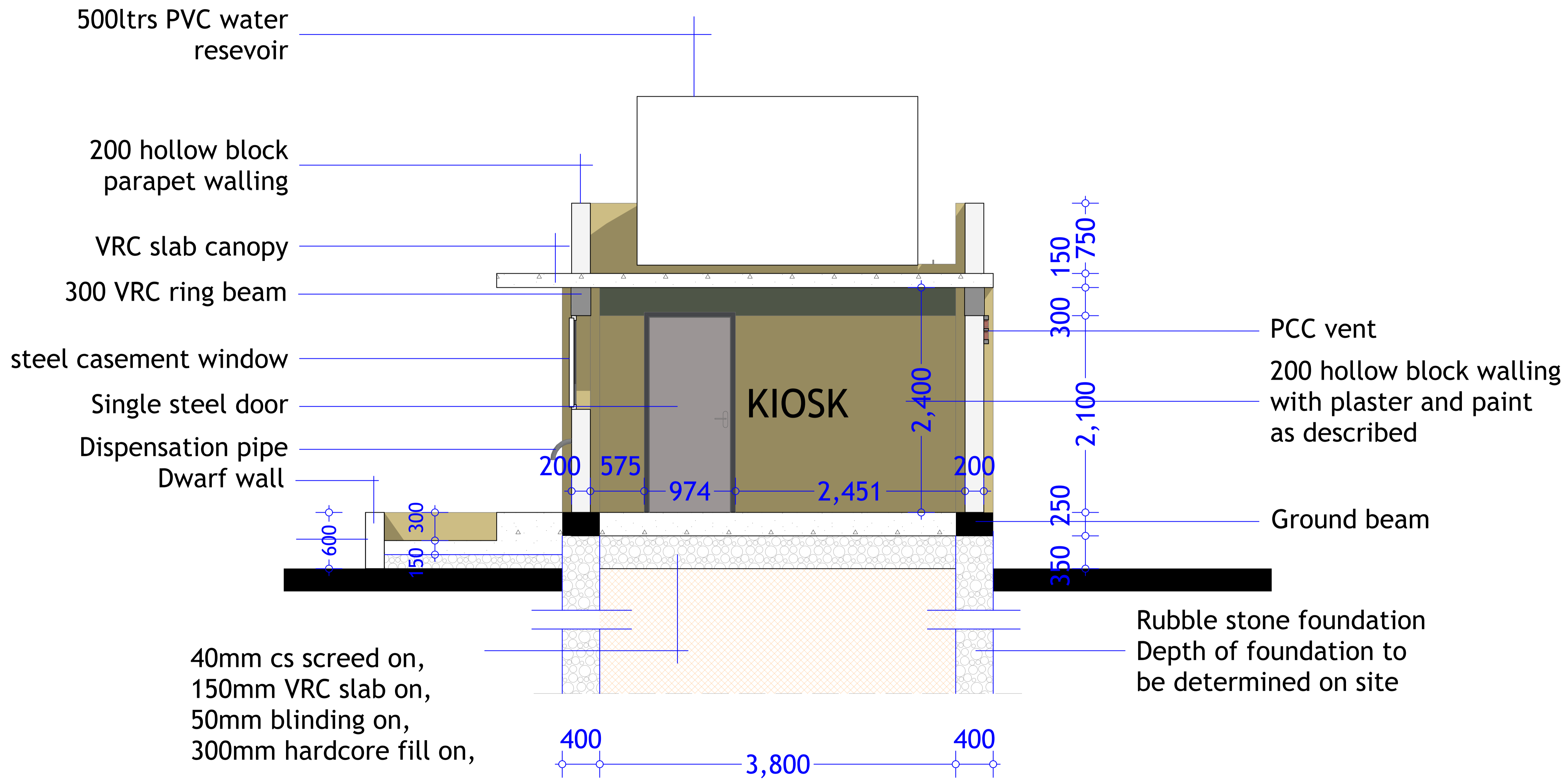
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
ELEVATIONS

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

WATER KIOSK

SHEET N<sup>o</sup>:  
18/32



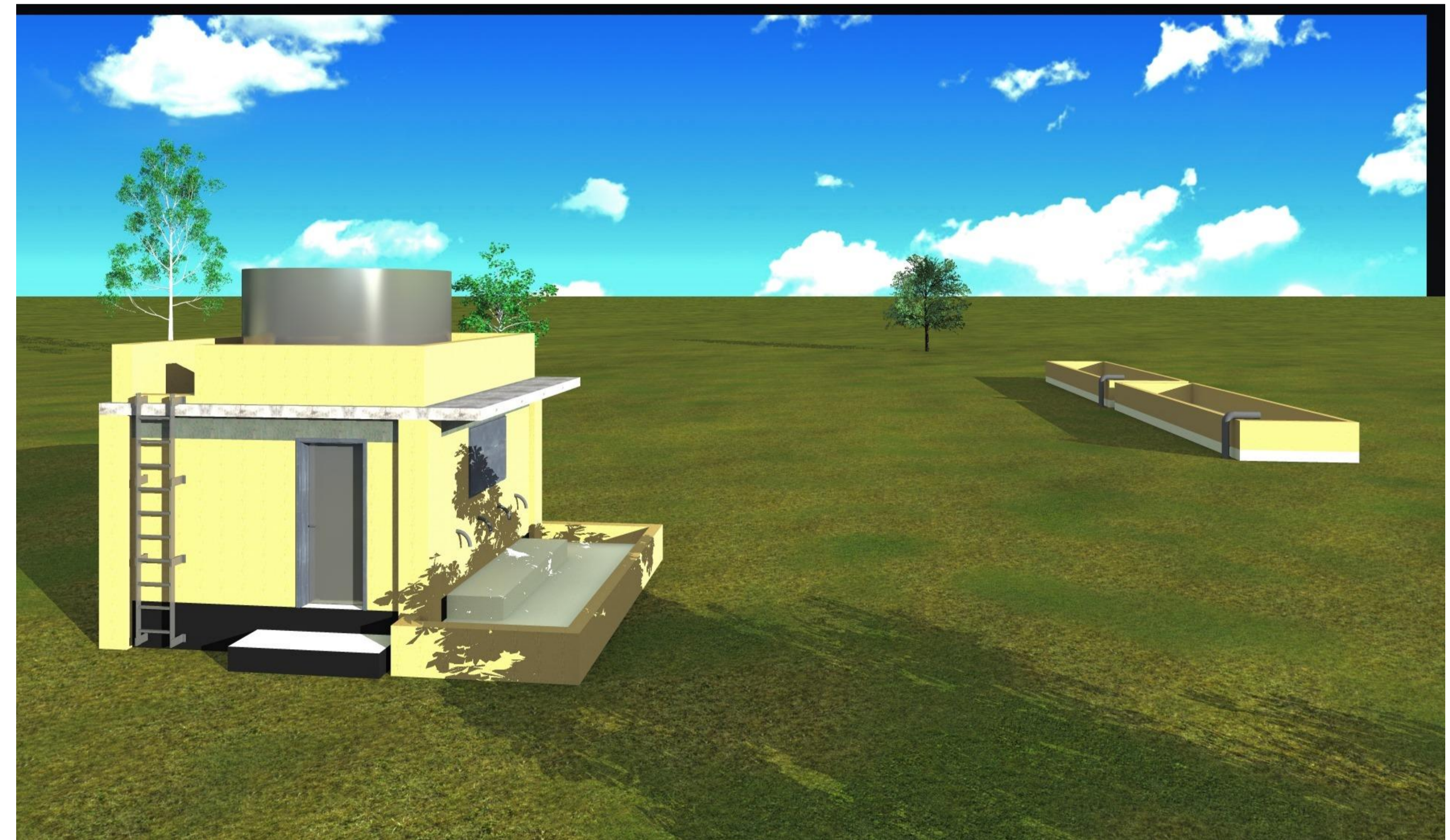
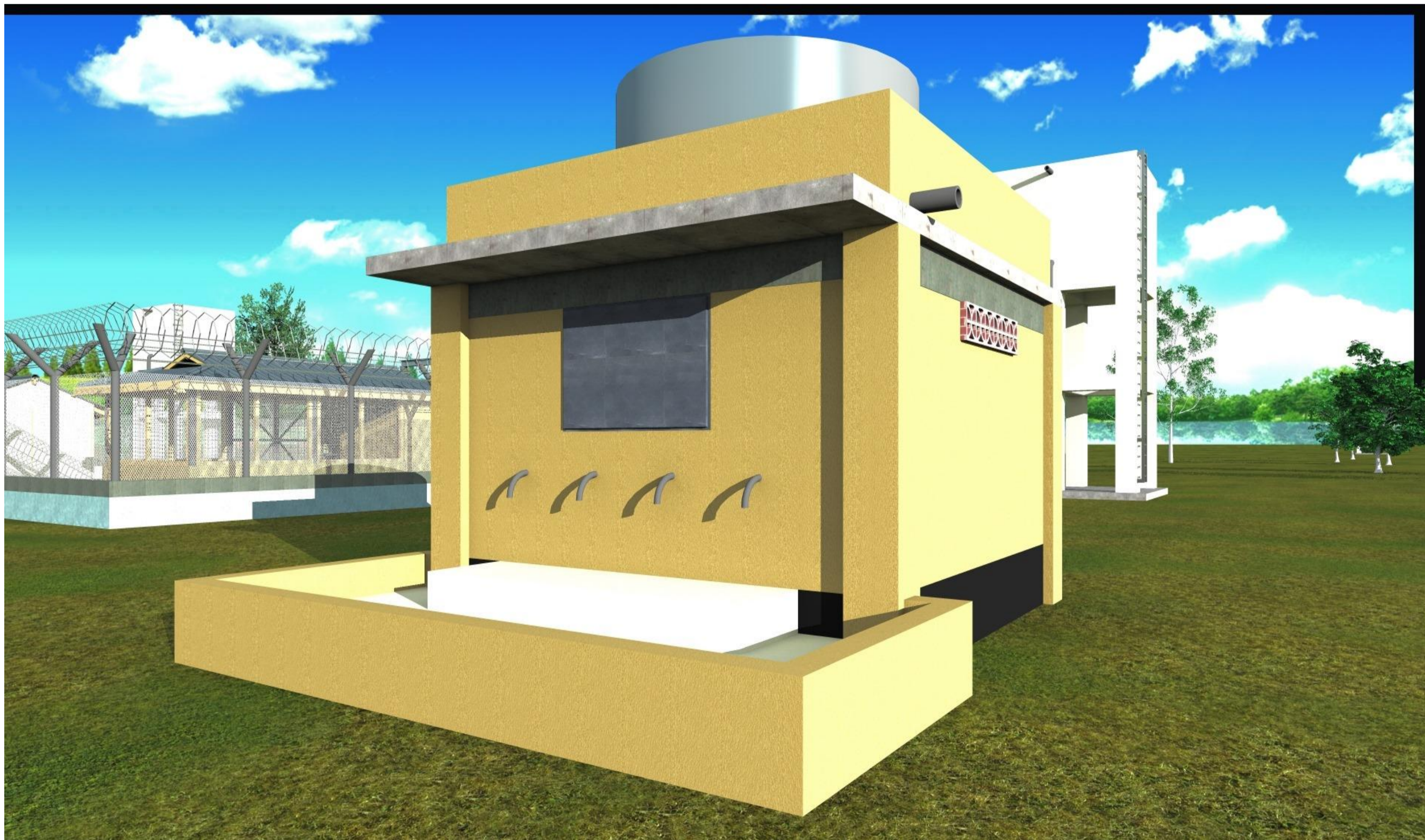
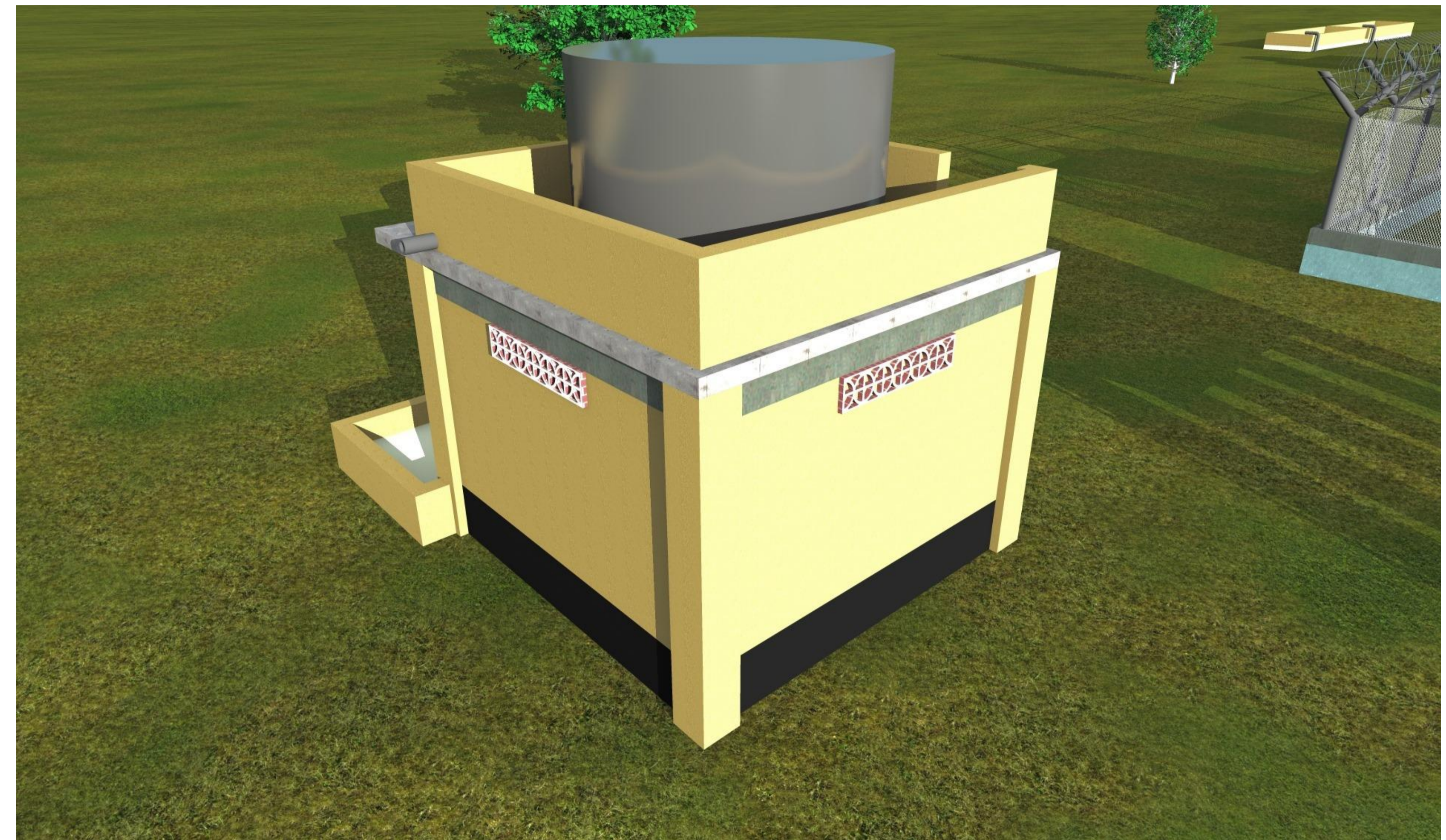
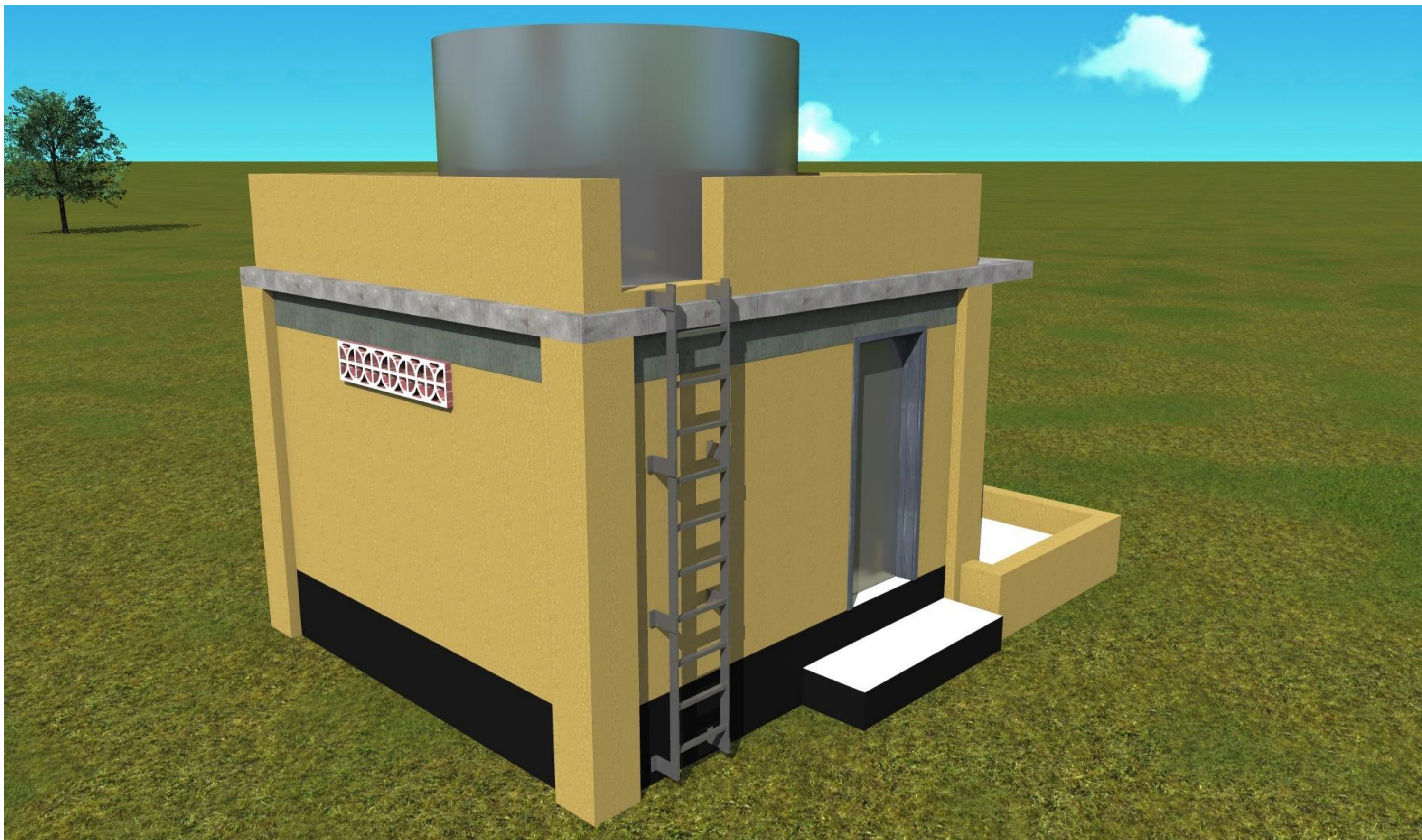
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
SECTION

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

DRAWING TITLE:	
DRAWING N <sup>o</sup> :	
PROJECT N <sup>o</sup> :	

WATER KIOSK  
SHEET N<sup>o</sup>:  
**19/32**



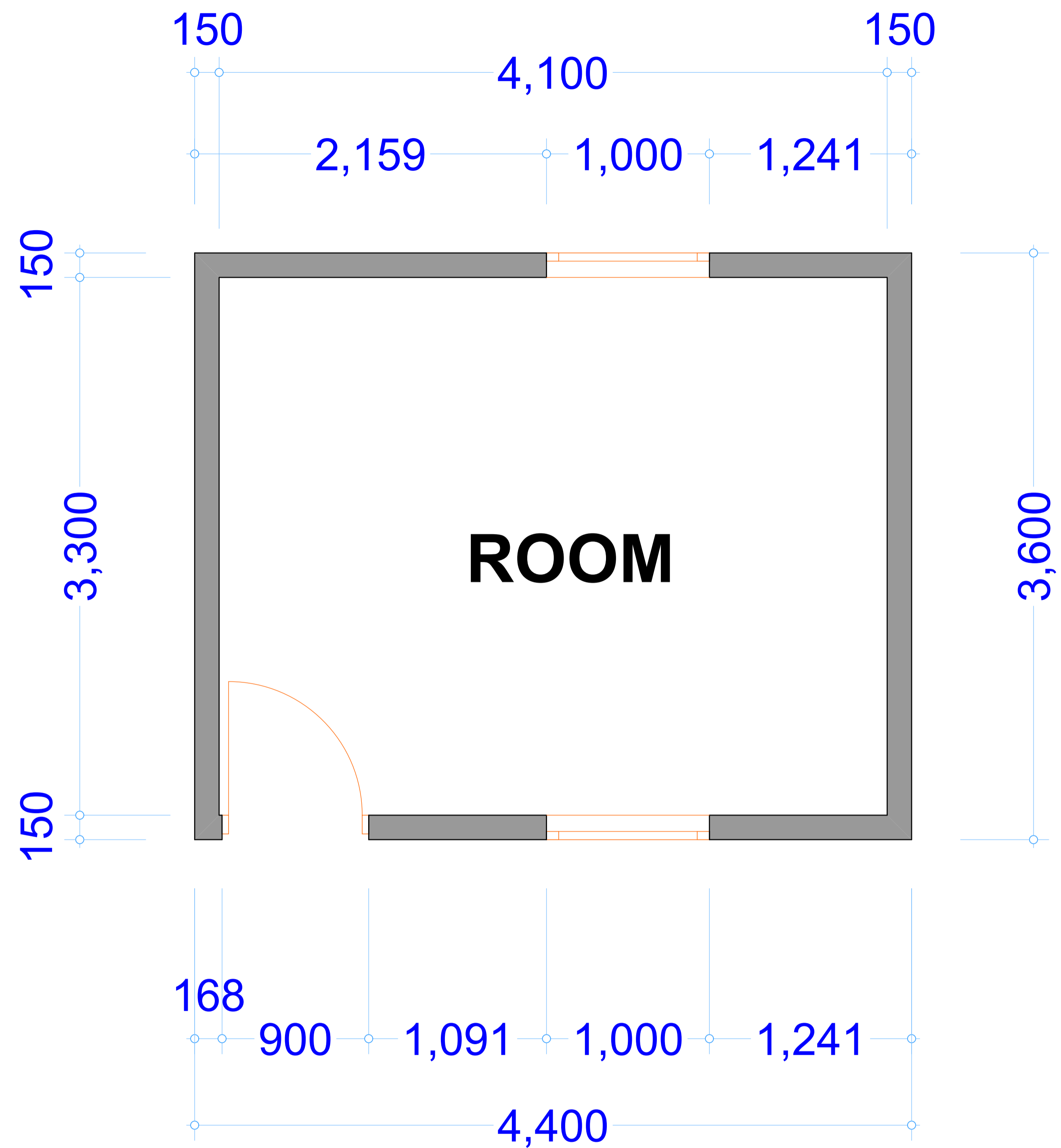
**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
3D Models

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

<b>DRAWING TITLE:</b>
<b>DRAWING N<sup>o</sup>:</b>
<b>PROJECT N<sup>o</sup>:</b>

<b>WATER KIOSK</b>
<b>SHEET N<sup>o</sup>:</b> <b>20/32</b>



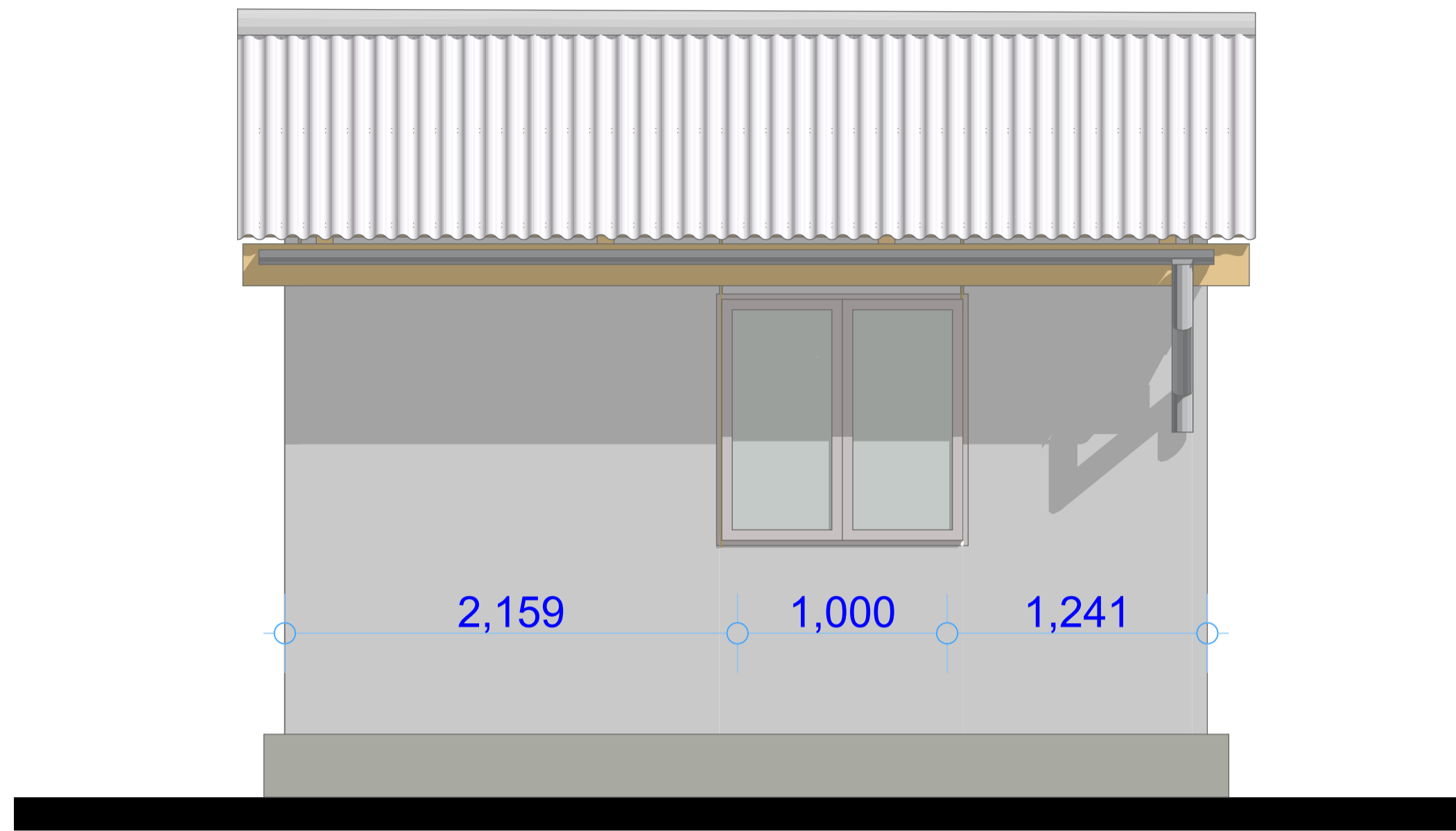
## FLOOR LAYOUT

**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

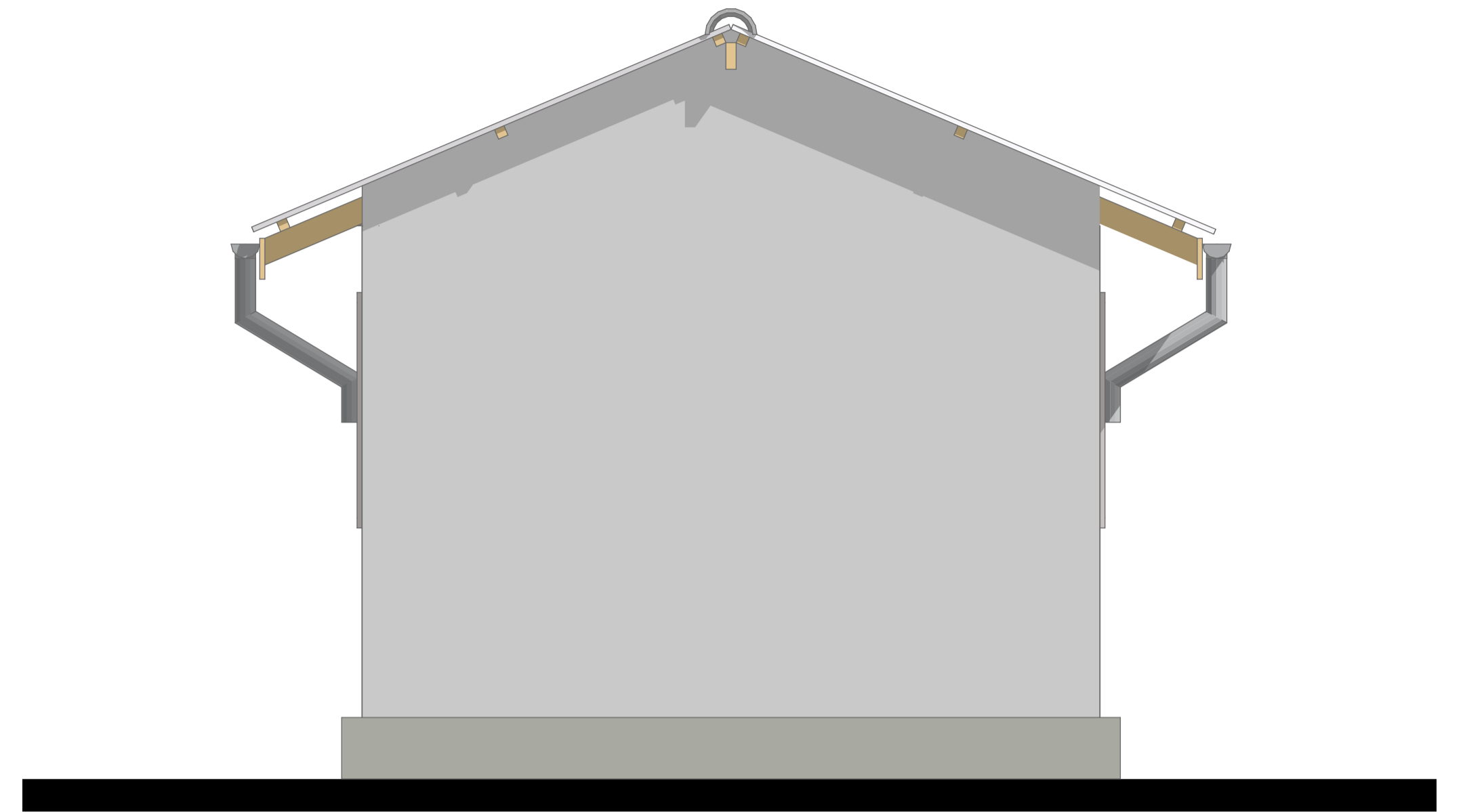
**SHEET TITLE:**  
FLOOR LAYOUT

SCALE		<b>DRAWING TITLE:</b>	CARETAKERS ROOM
DATE	APRIL, 2017	<b>DRAWING N<sup>o</sup>:</b>	
DESIGNED BY:	J. NANDWA	<b>PROJECT N<sup>o</sup>:</b>	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

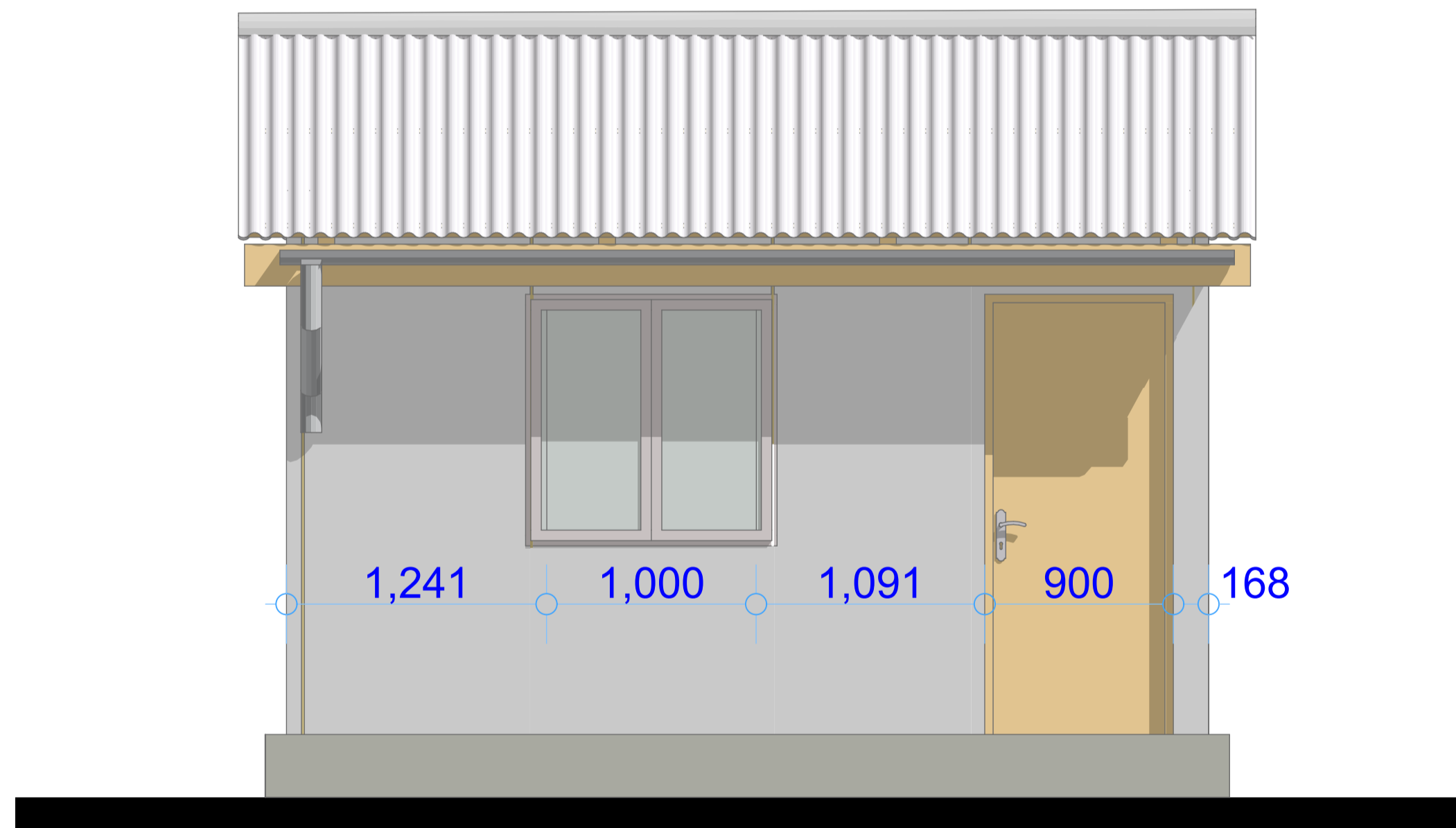
**SHEET N<sup>o</sup>:**  
**21 / 32**



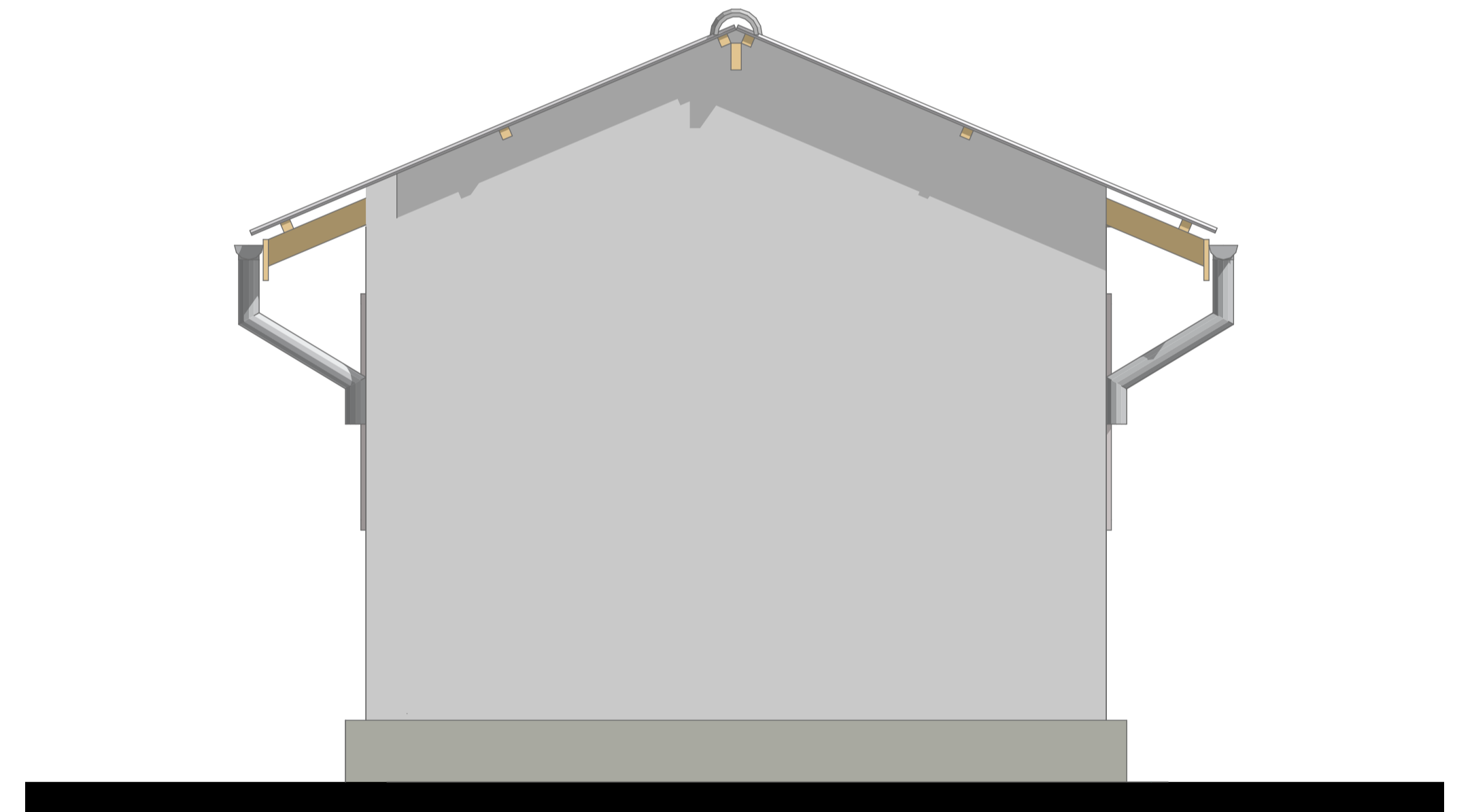
**SOUTH ELEVATION**



**EAST ELEVATION**



**NORTH ELEVATION**



**WEST ELEVATION**

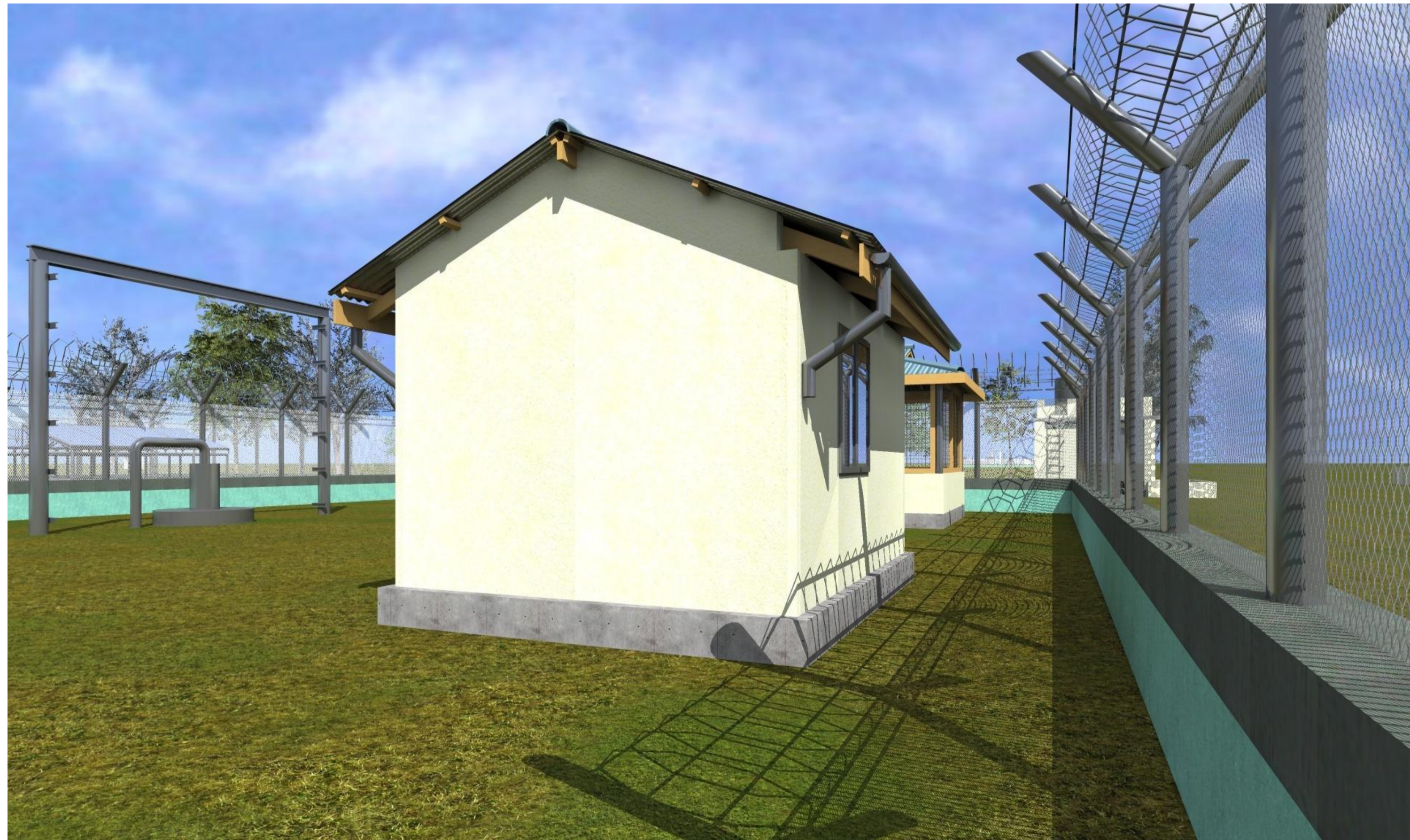
**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
**ELEVATIONS**

SCALE		<b>DRAWING TITLE:</b>	CARETAKERS ROOM
DATE	APRIL, 2017	<b>DRAWING N<sup>o</sup>:</b>	
DESIGNED BY:	J. NANDWA	<b>PROJECT N<sup>o</sup>:</b>	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

**SHEET N<sup>o</sup>:**  
**22 / 32**





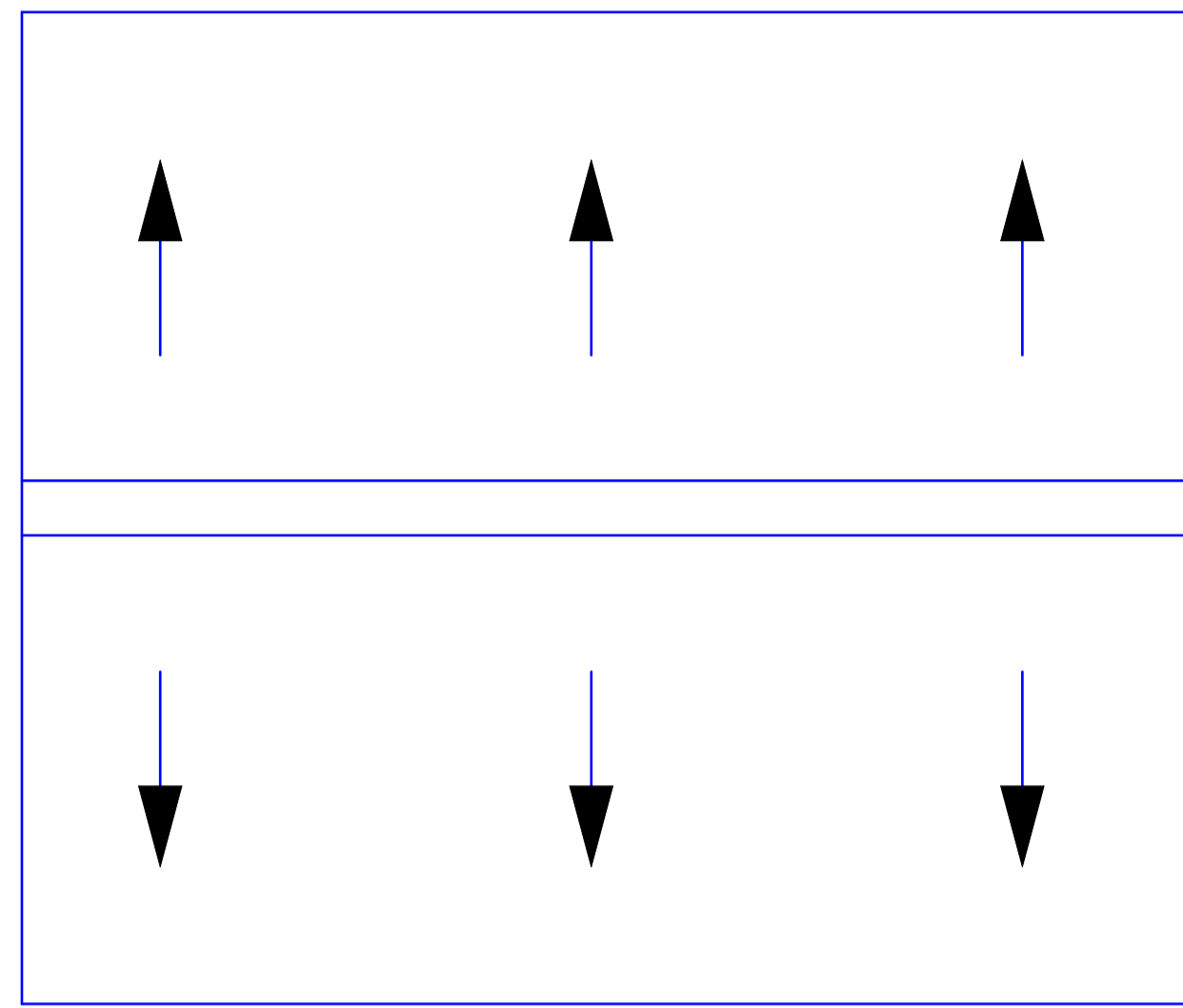
**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
3D Models

SCALE		<b>DRAWING TITLE:</b>	CARETAKERS ROOM
DATE	APRIL, 2017	<b>DRAWING N<sup>o</sup>:</b>	
DESIGNED BY:	J. NANDWA	<b>PROJECT N<sup>o</sup>:</b>	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

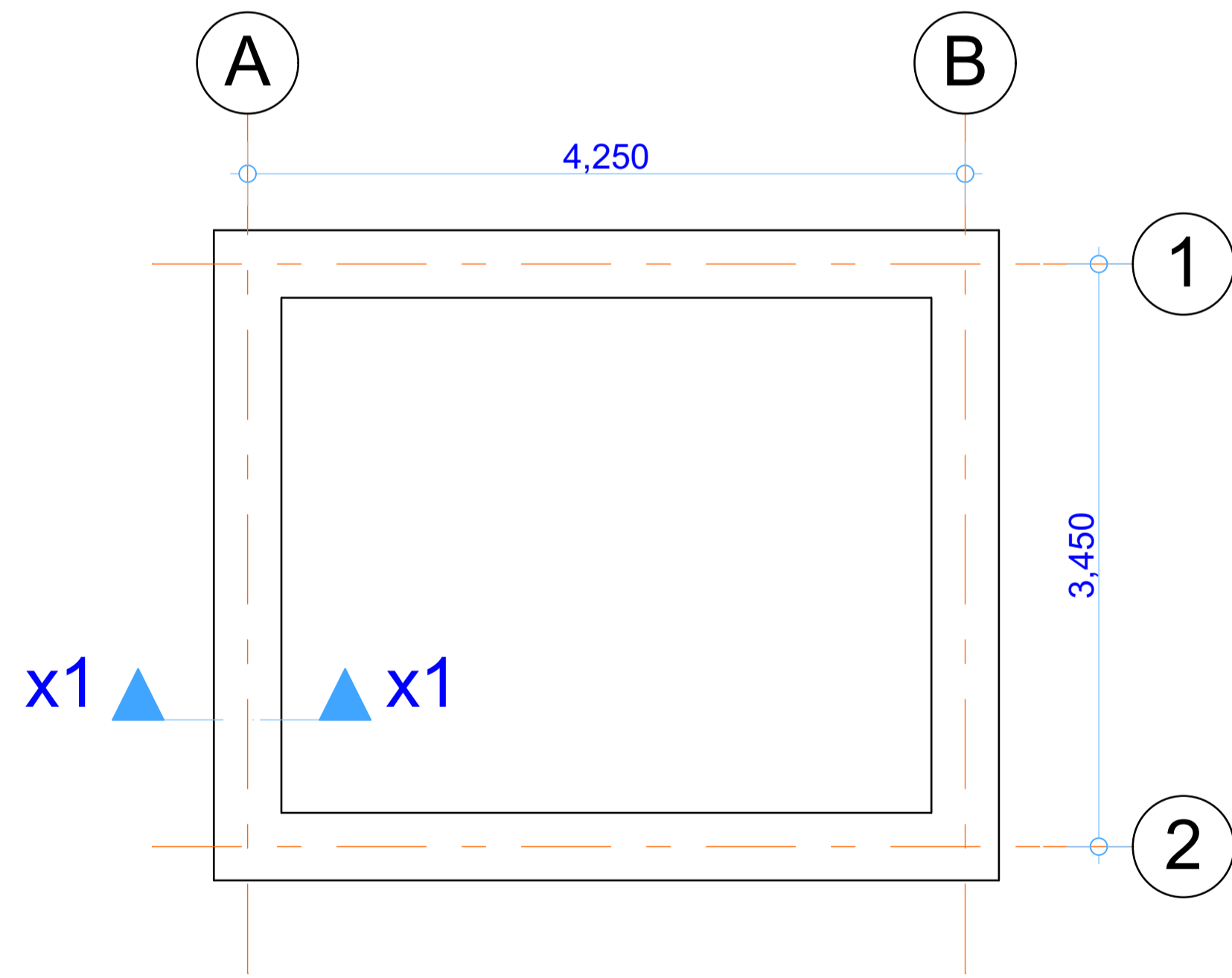
**SHEET N<sup>o</sup>:**  
24/32



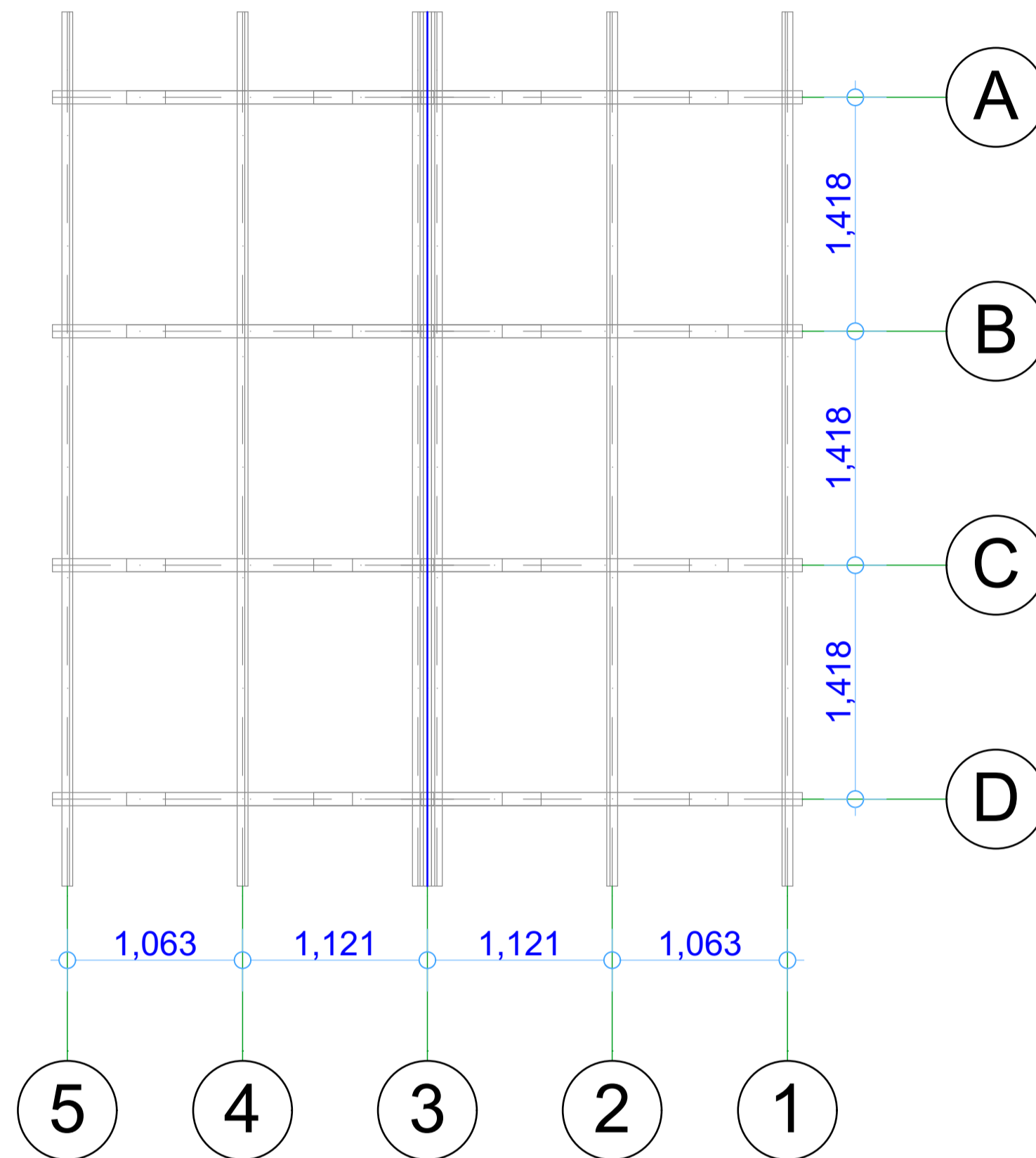


**LEGEND**  
 —▶ Direction of fall

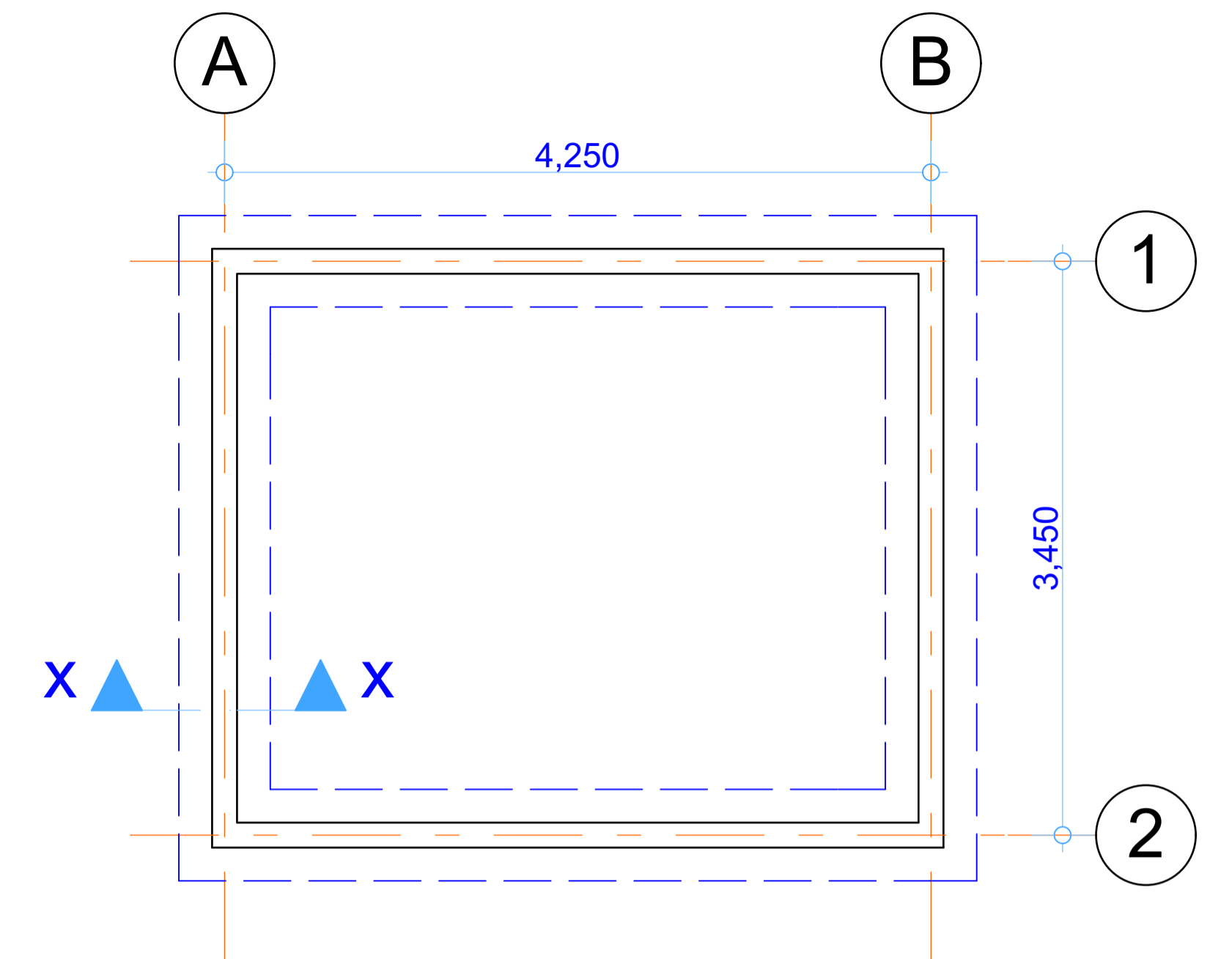
**ROOF LAYOUT**



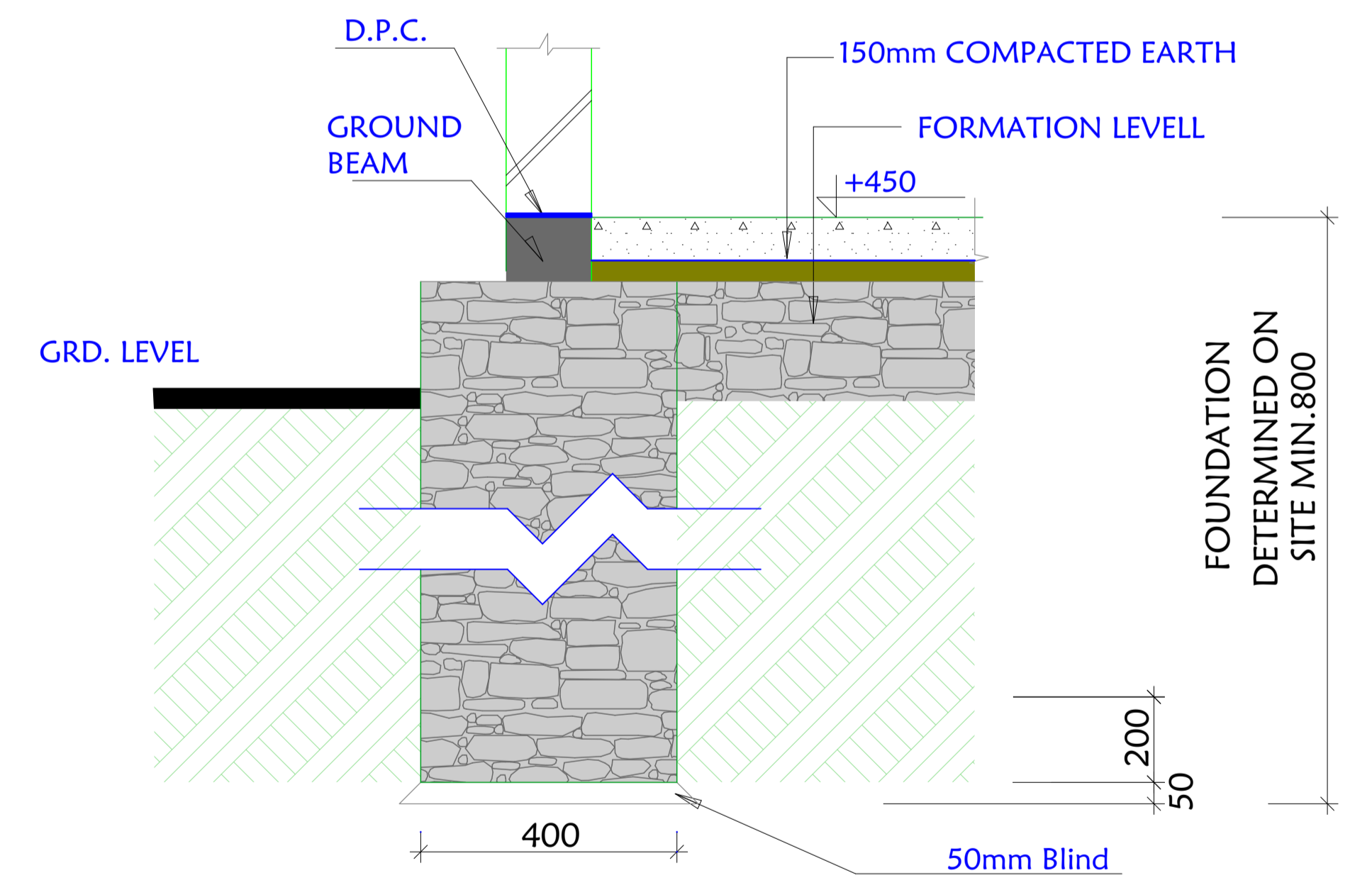
**RUBBLE STONE FOUNDATION LAYOUT**



**TRUSS LAYOUT**



**STRIP FOUNDATION LAYOUT**



**SECTION X-X**  
 SCALE 1:25

**RUBBLE STONE FOUNDATION FOOTING DETAIL**

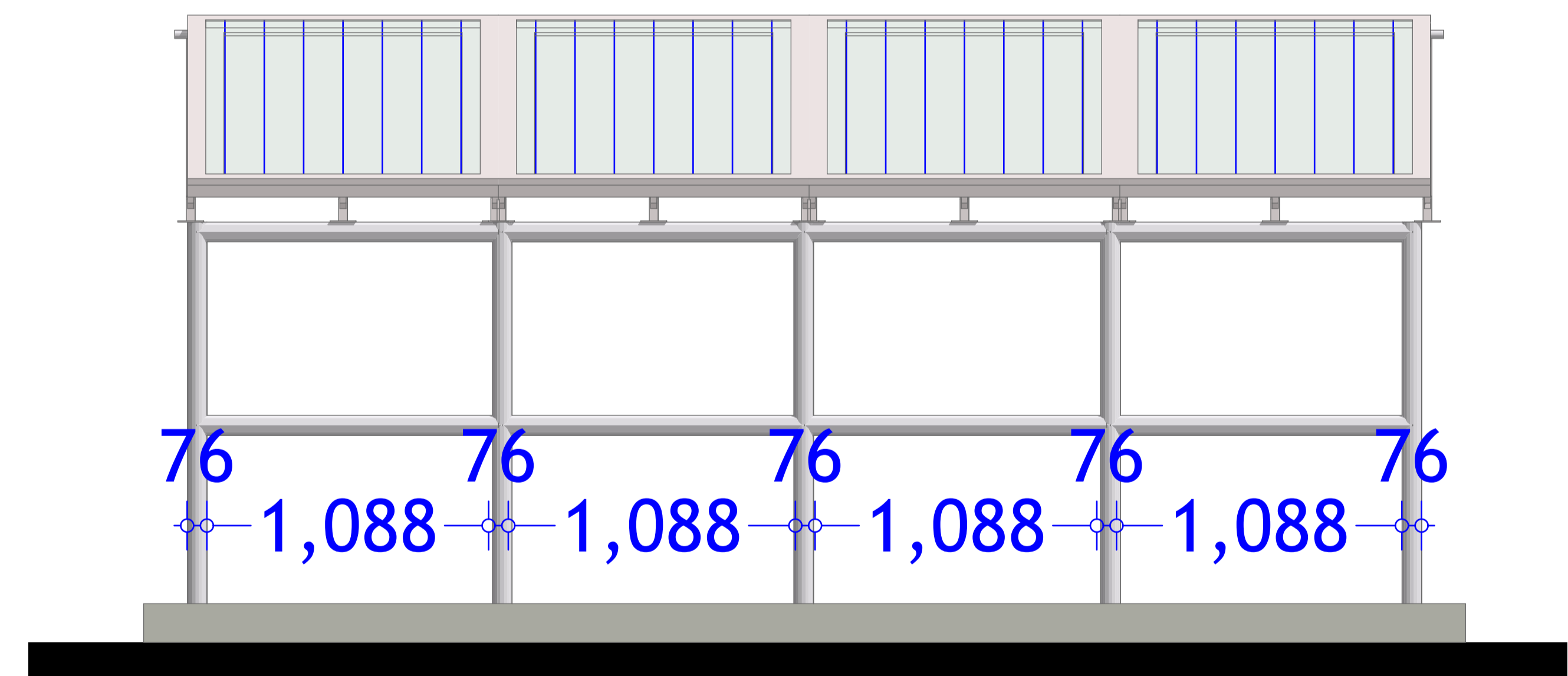
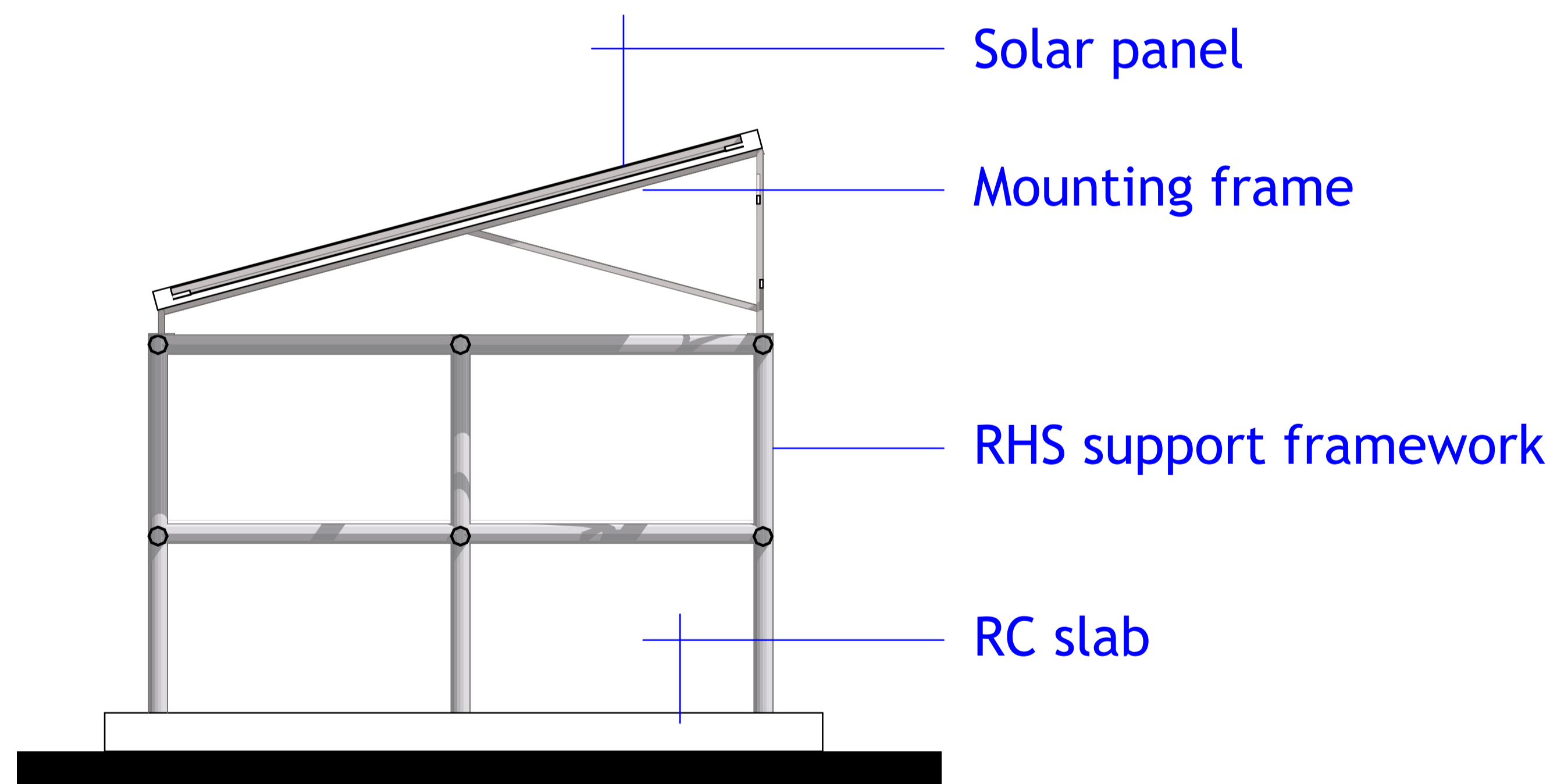
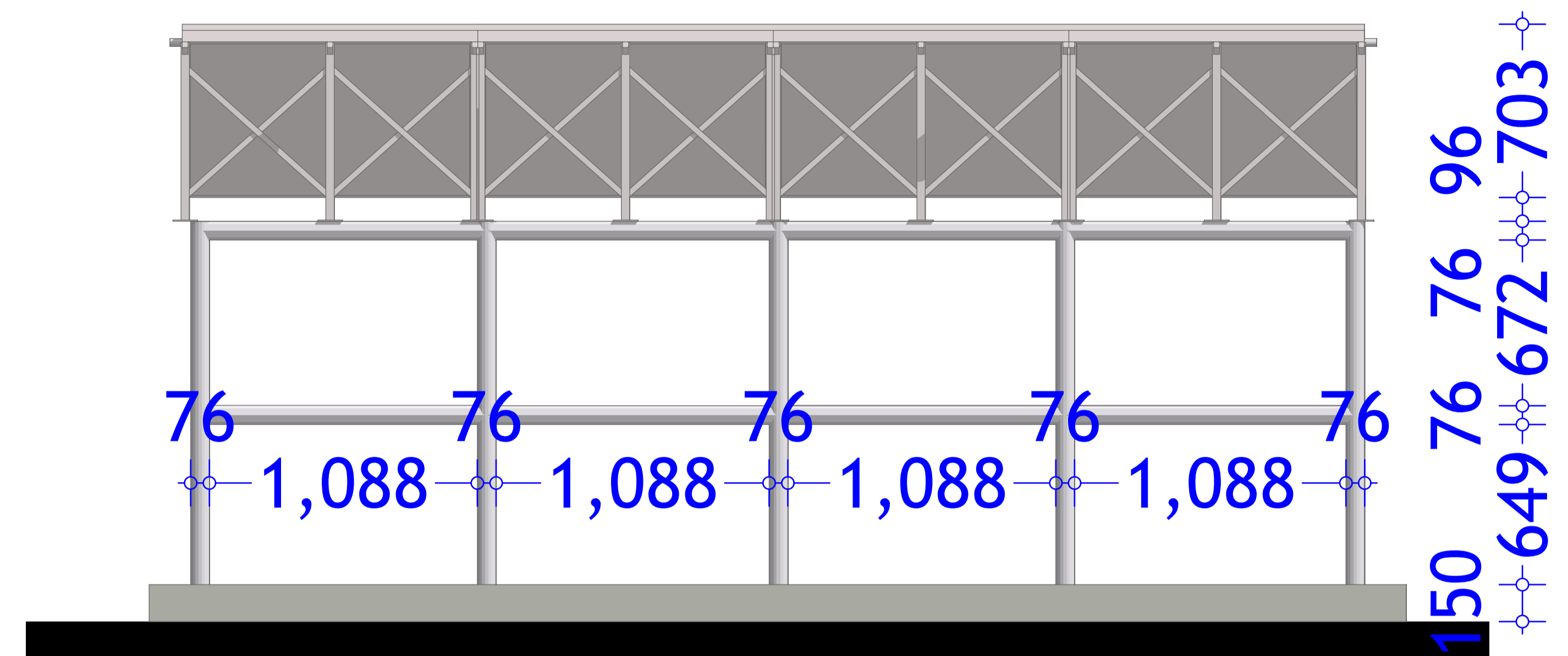
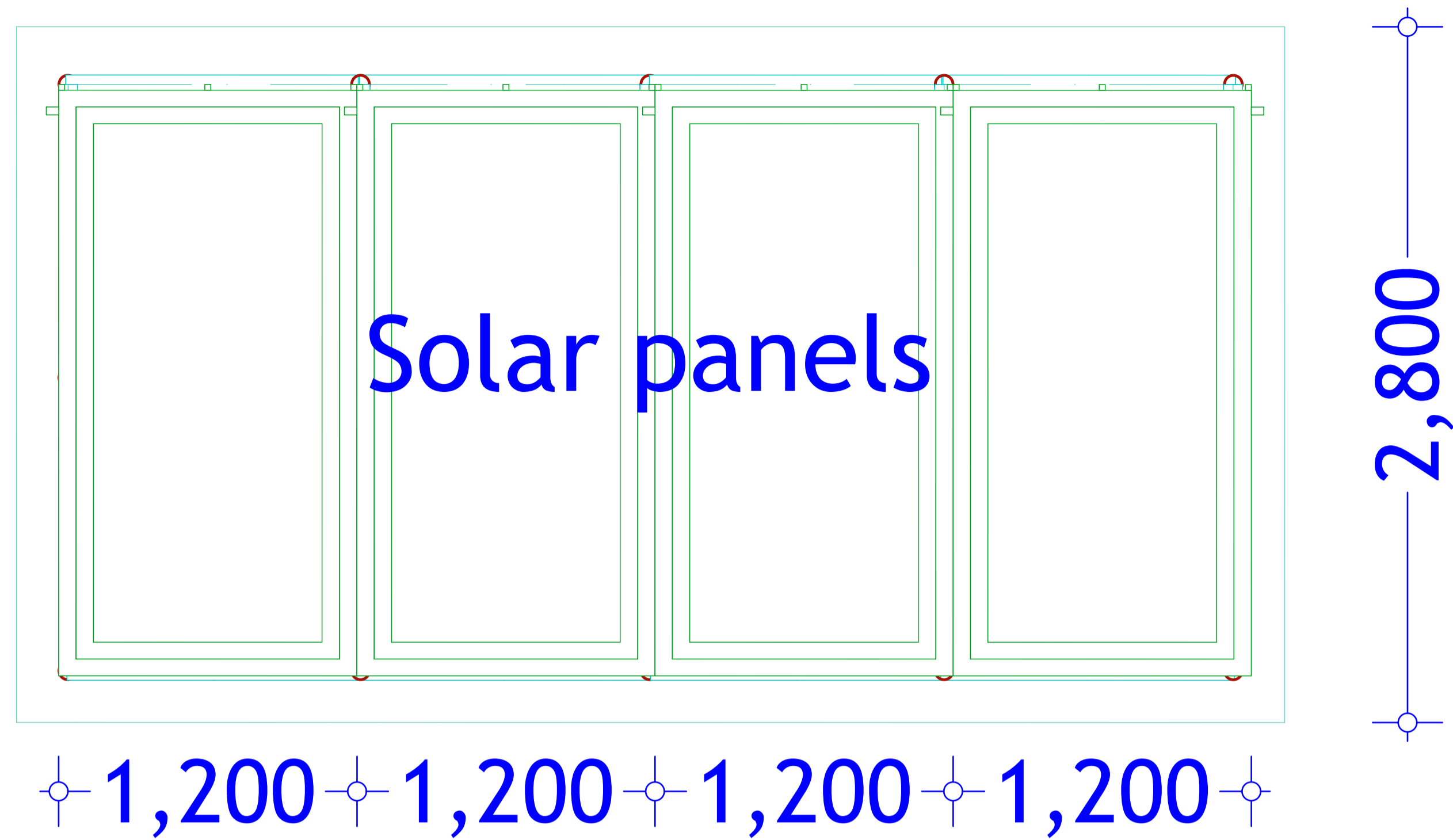
**PROJECT.** PROPOSED BALANBAL BOREHOLE  
 REHABILITATION  
 -BALANBAL DISTRICT-

**SHEET TITLE:**  
**STRUCTURAL**

SCALE		<b>DRAWING TITLE:</b>	
DATE	APRIL, 2017	<b>DRAWING N<sup>o</sup>:</b>	
DESIGNED BY:	J. NANDWA	<b>PROJECT N<sup>o</sup>:</b>	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

**CARETAKERS ROOM**

**SHEET N<sup>o</sup>:**  
**25/32**



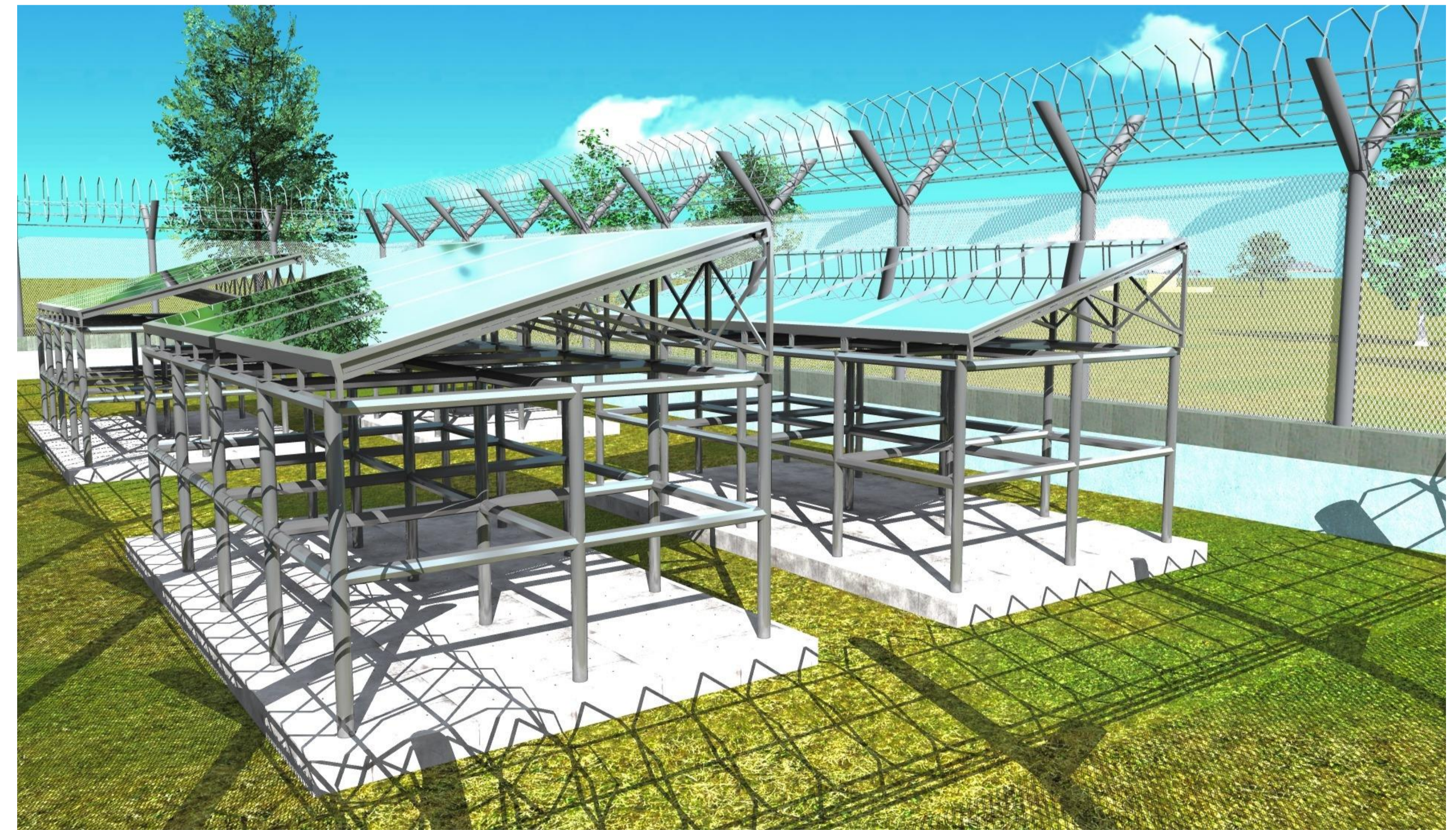
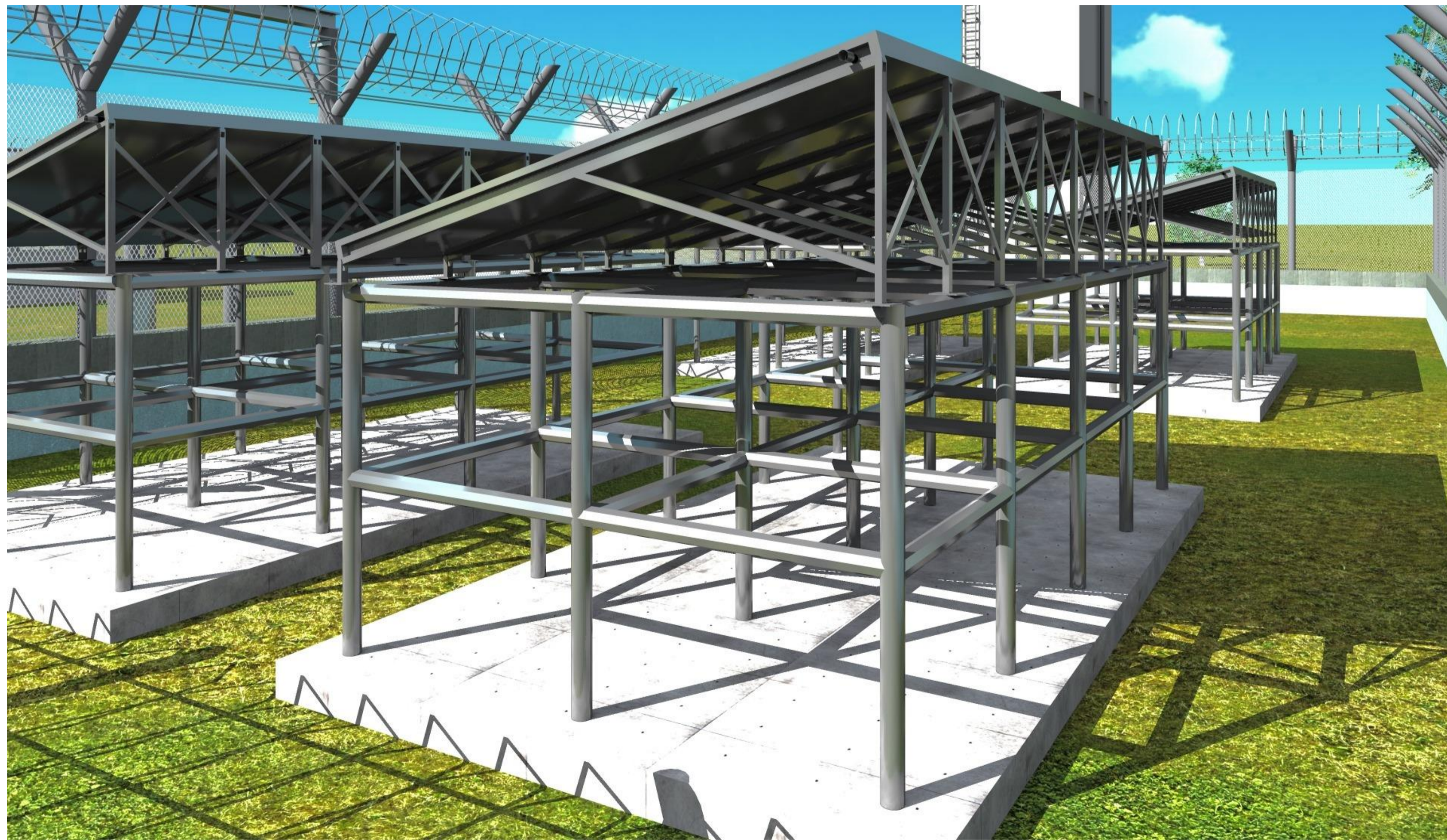
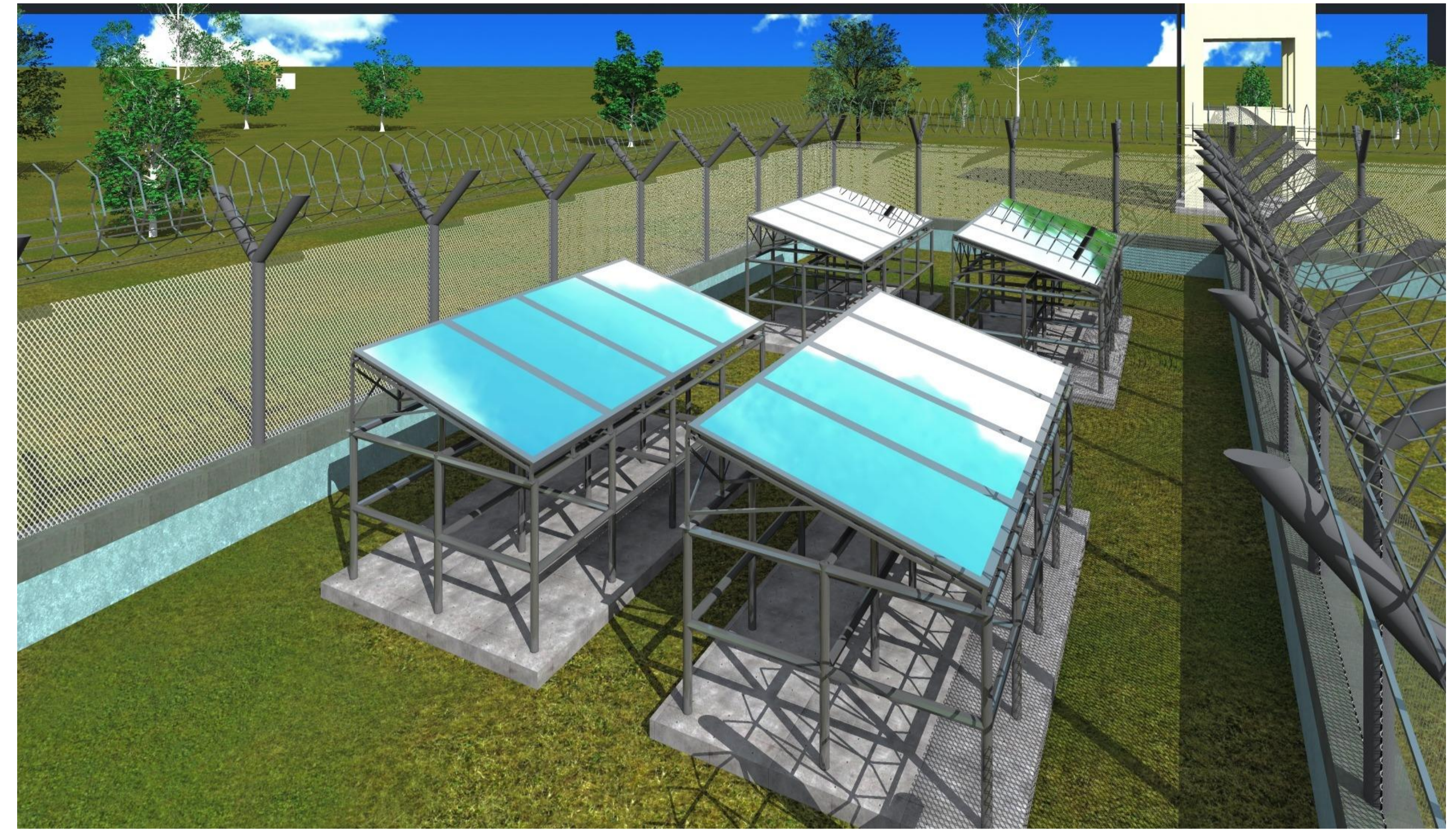
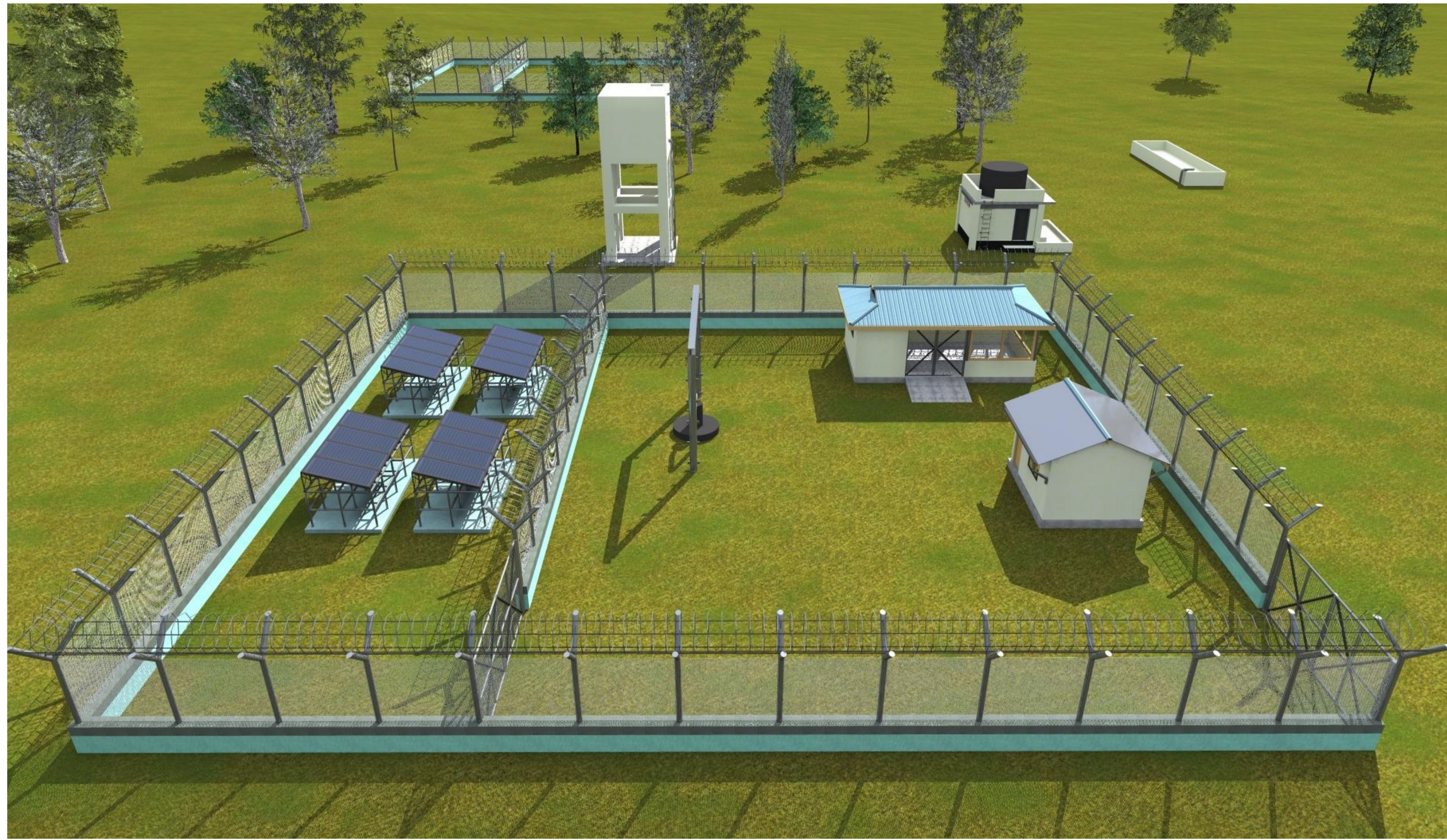
PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
DETAILS

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

LATRINES

SHEET N<sup>o</sup>:  
26/32

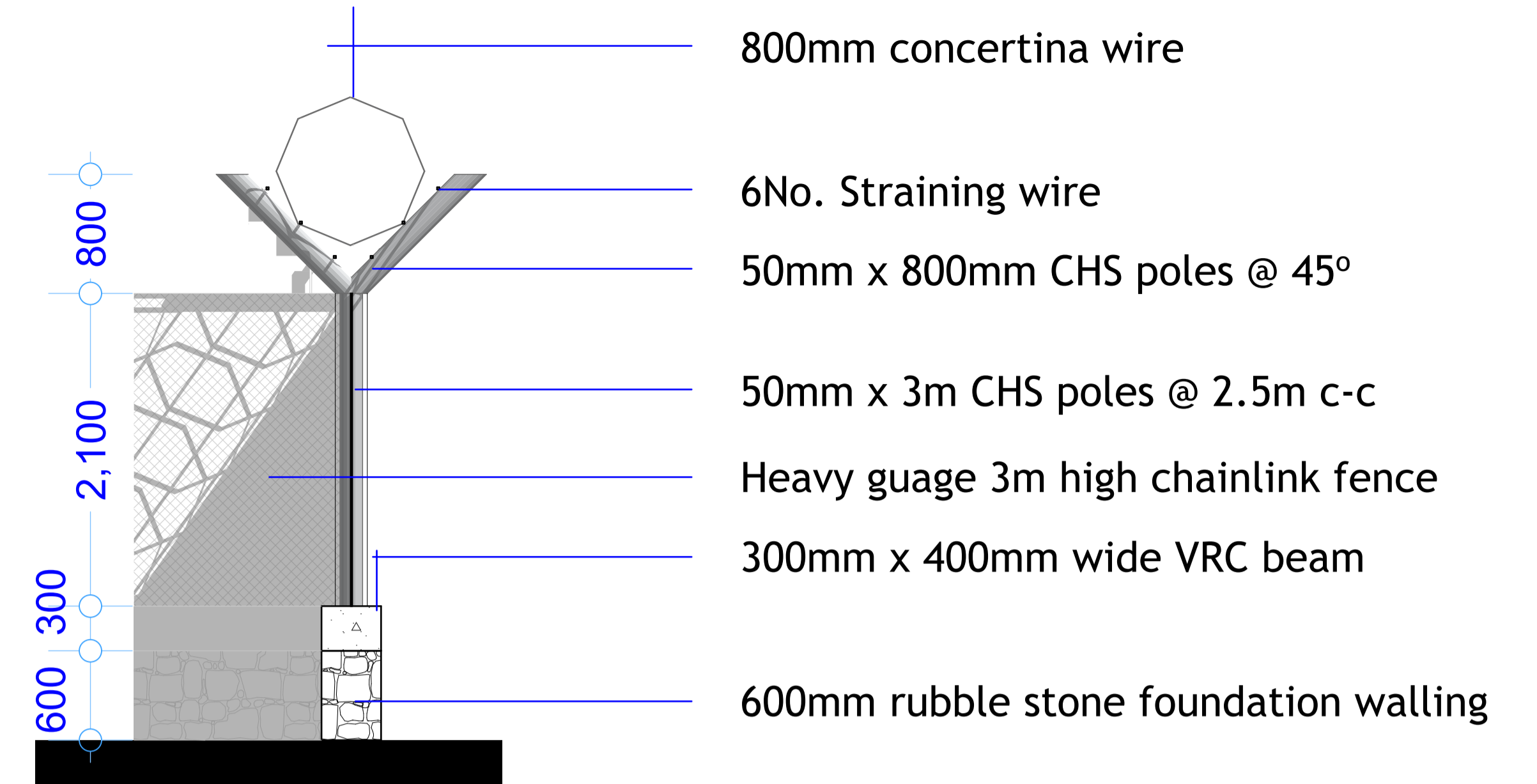
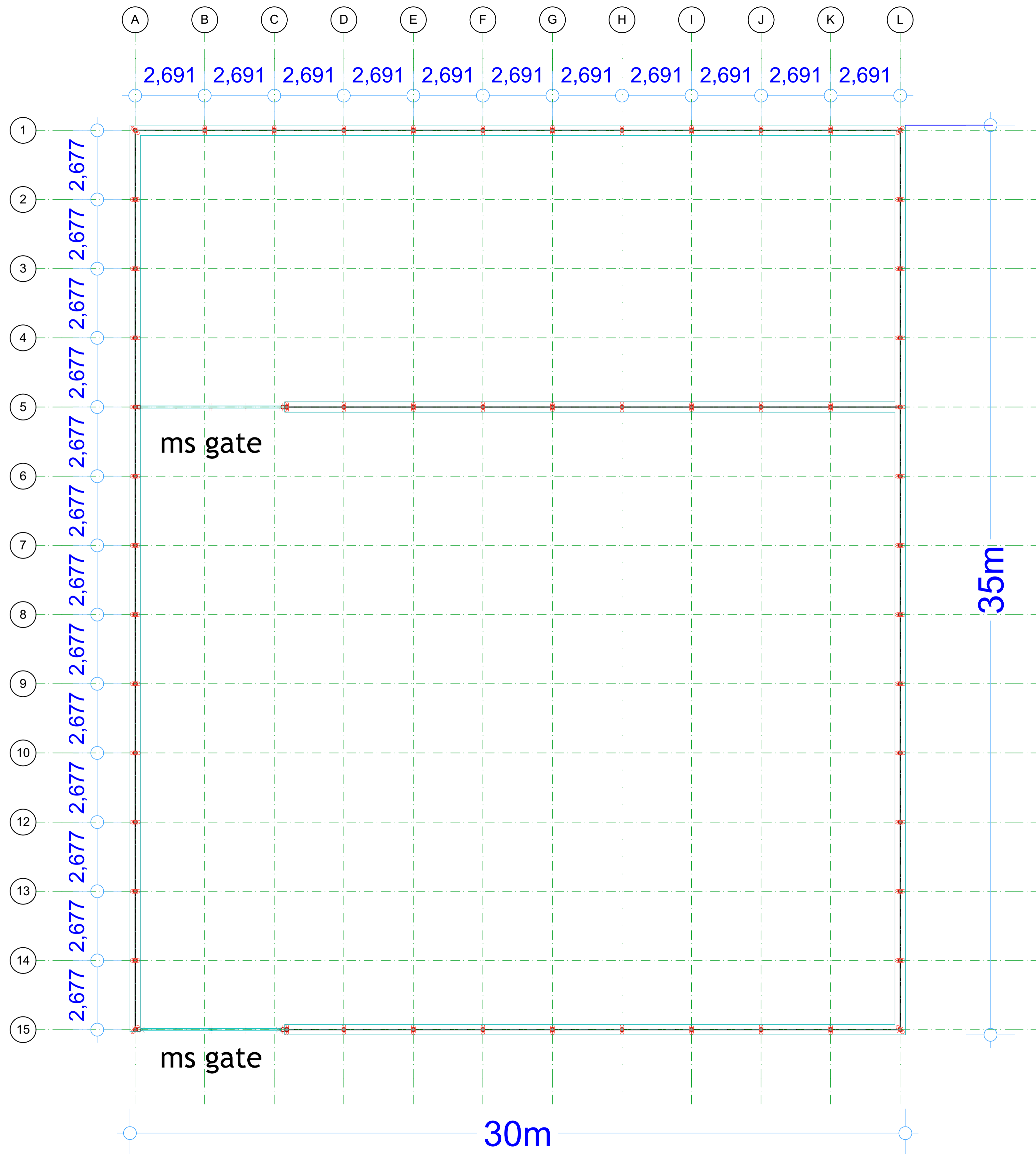


**PROJECT.** PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

**SHEET TITLE:**  
3D MODELS

SCALE		DRAWING TITLE:	
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :	
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :	
DRAWN BY:	J. NANDWA		
REVIEWED BY:			
APPROVED BY:			

**LATRINES**  
SHEET N<sup>o</sup>:  
**27/32**

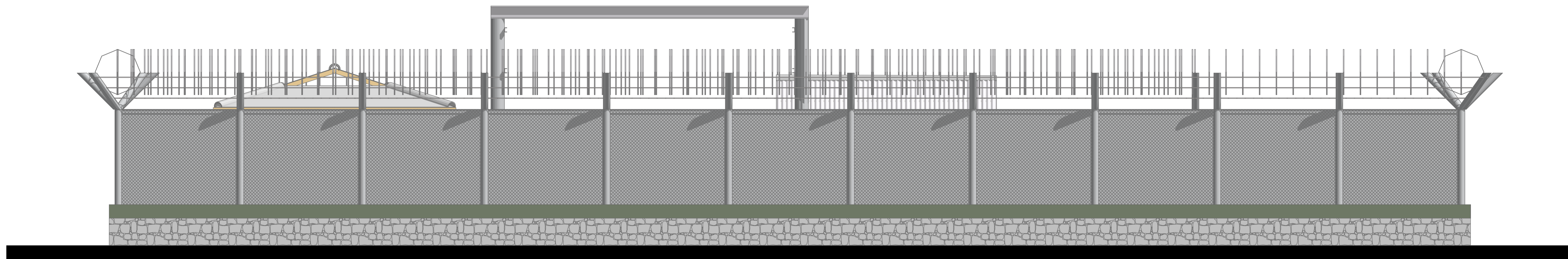
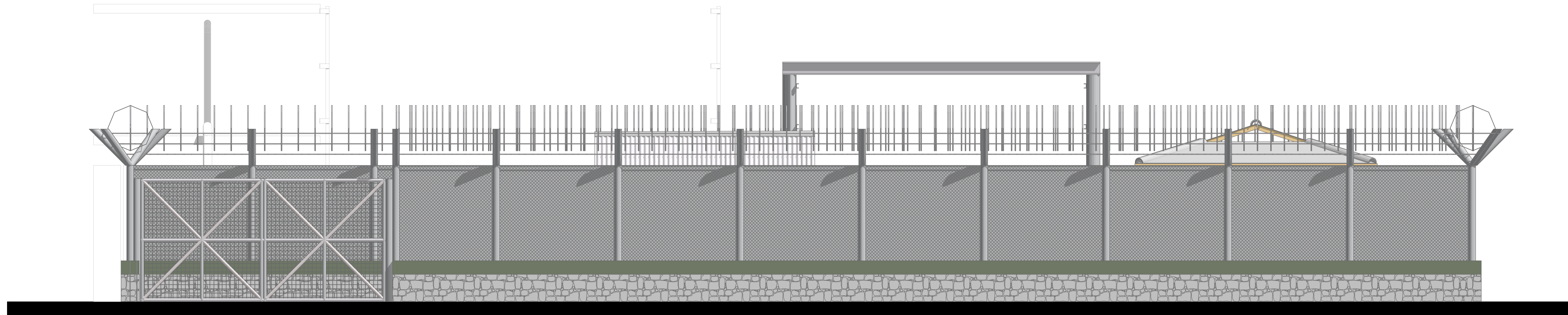


PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:

SCALE		DRAWING TITLE:
DATE	APRIL, 2017	FLOOR LAYOUT
DESIGNED BY:	J. NANDWA	DRAWING N <sup>o</sup> :
DRAWN BY:	J. NANDWA	PROJECT N <sup>o</sup> :
REVIEWED BY:		
APPROVED BY:		

SHEET N<sup>o</sup>:  
**28 / 32**

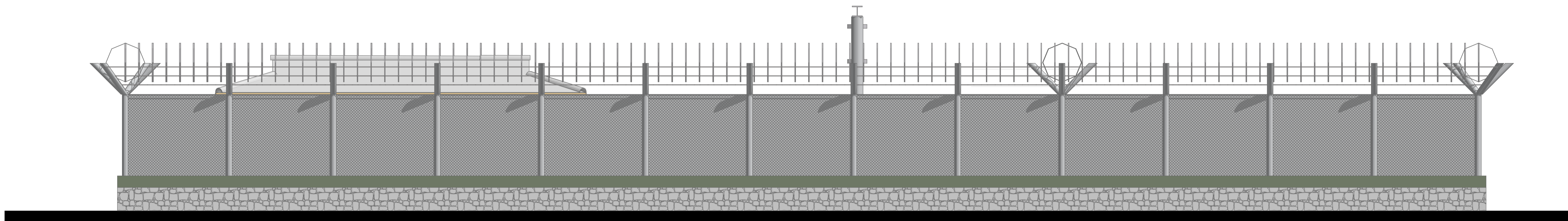
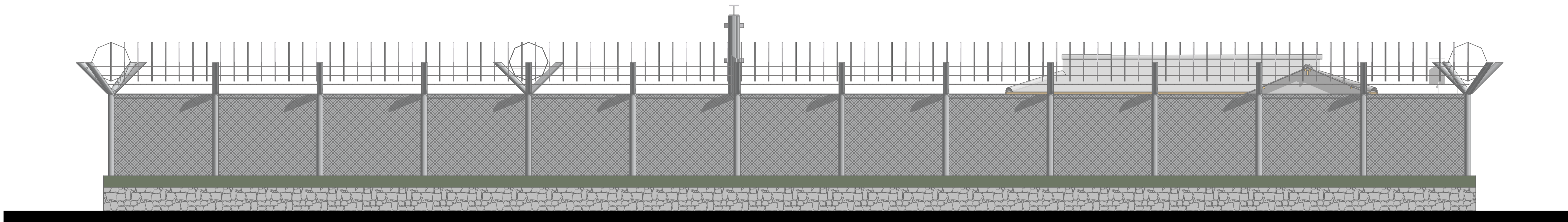


PROJECT. PROPOSED BALANBAL BOREHOLE  
 REHABILITATION  
 -BALANBAL DISTRICT-

SHEET TITLE:  
 ELEVATIONS

SCALE		DRAWING TITLE:
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :
DRAWN BY:	J. NANDWA	
REVIEWED BY:		
APPROVED BY:		

SHEET N<sup>o</sup>:  
 29/32



PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

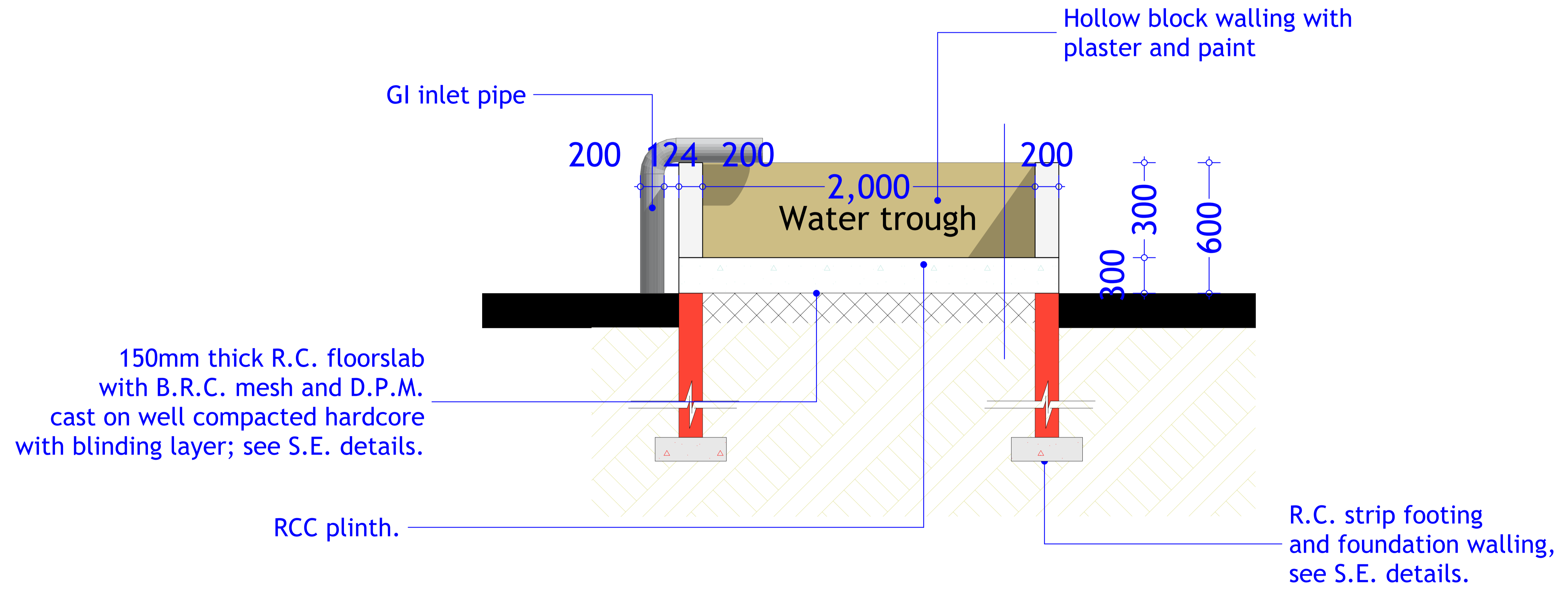
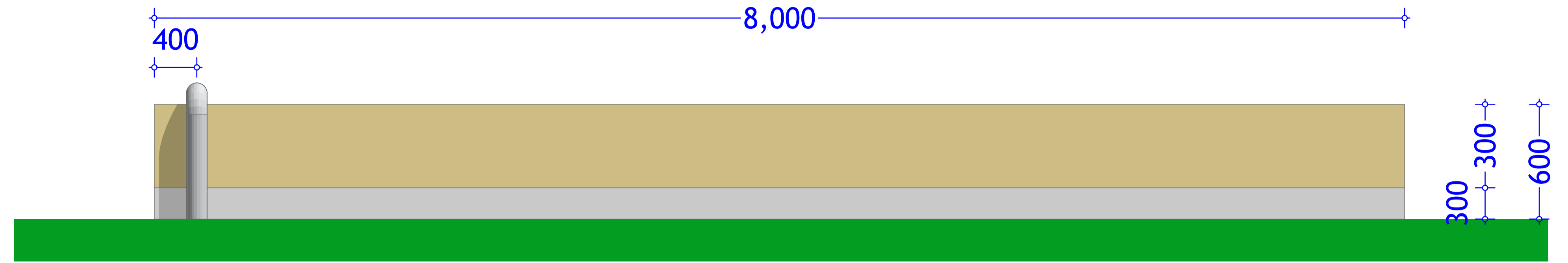
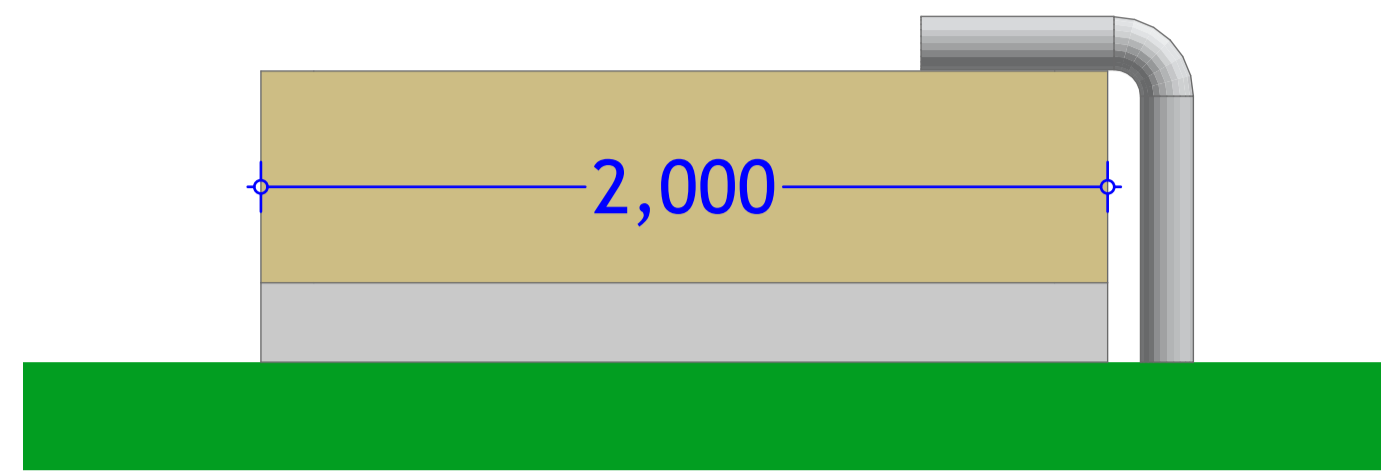
SHEET TITLE:  
ELEVATIONS

SCALE	
DATE	APRIL, 2017
DESIGNED BY:	J. NANDWA
DRAWN BY:	J. NANDWA
REVIEWED BY:	
APPROVED BY:	

DRAWING TITLE:
DRAWING N <sup>o</sup> :
PROJECT N <sup>o</sup> :

SHEET N<sup>o</sup>:

30 / 32

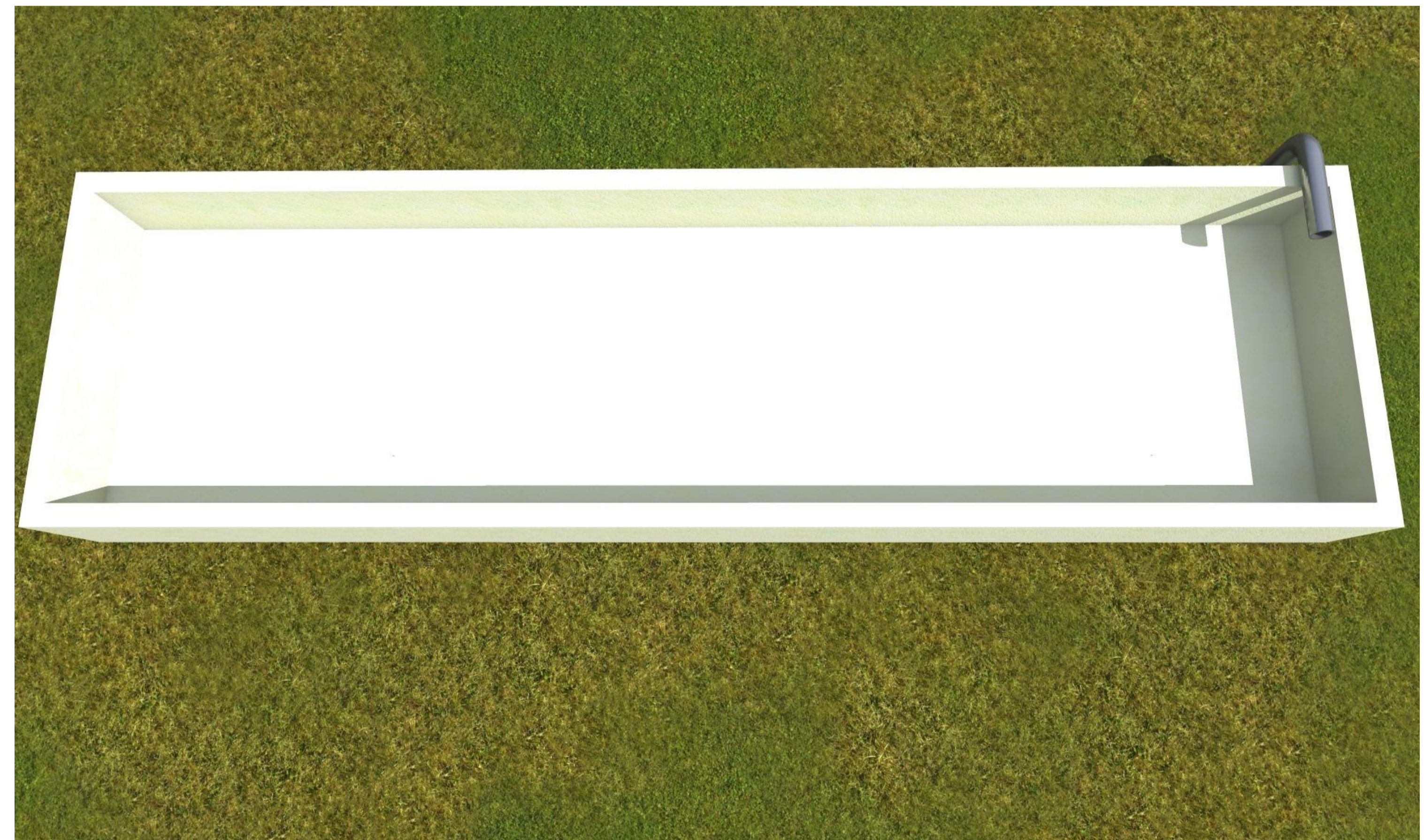
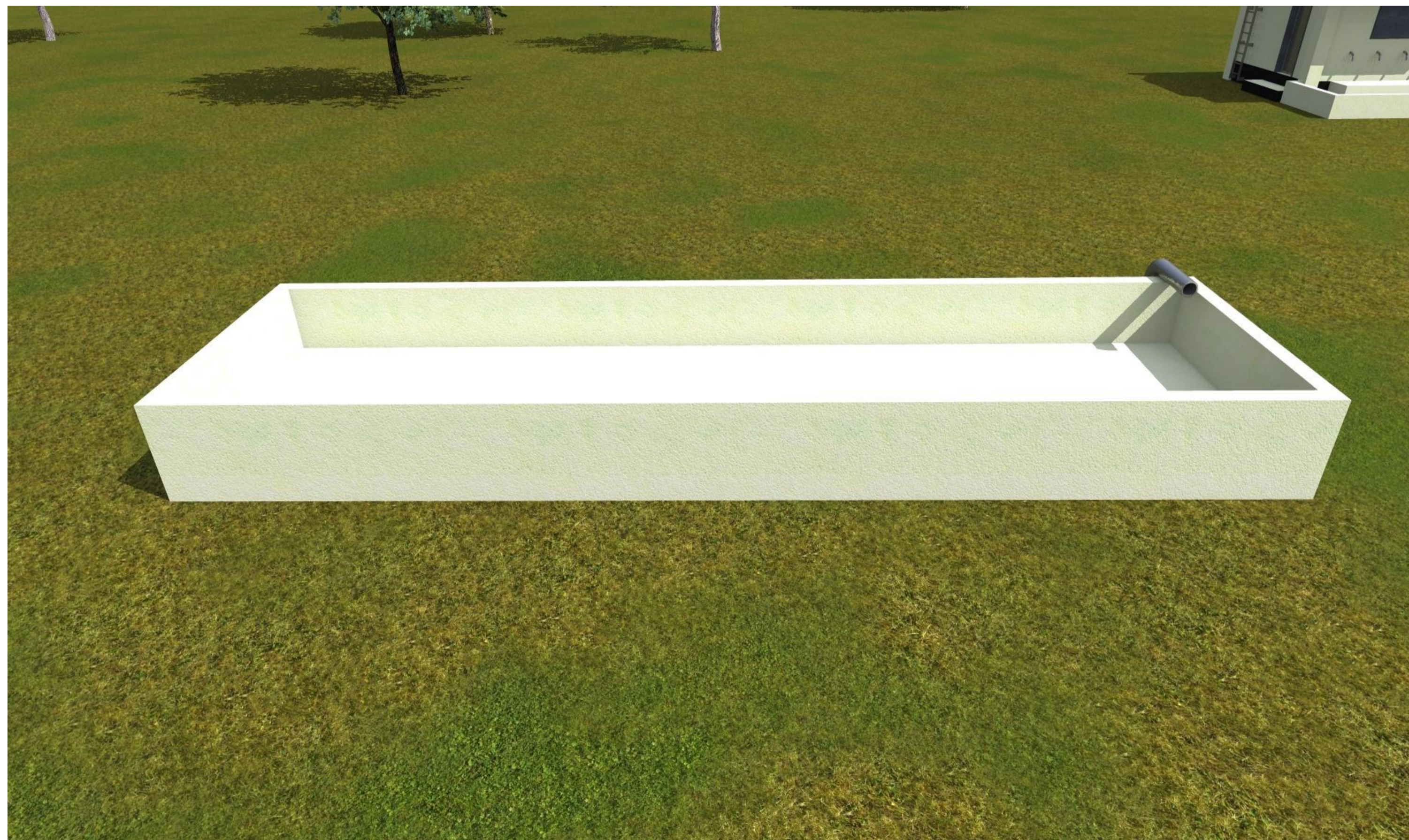
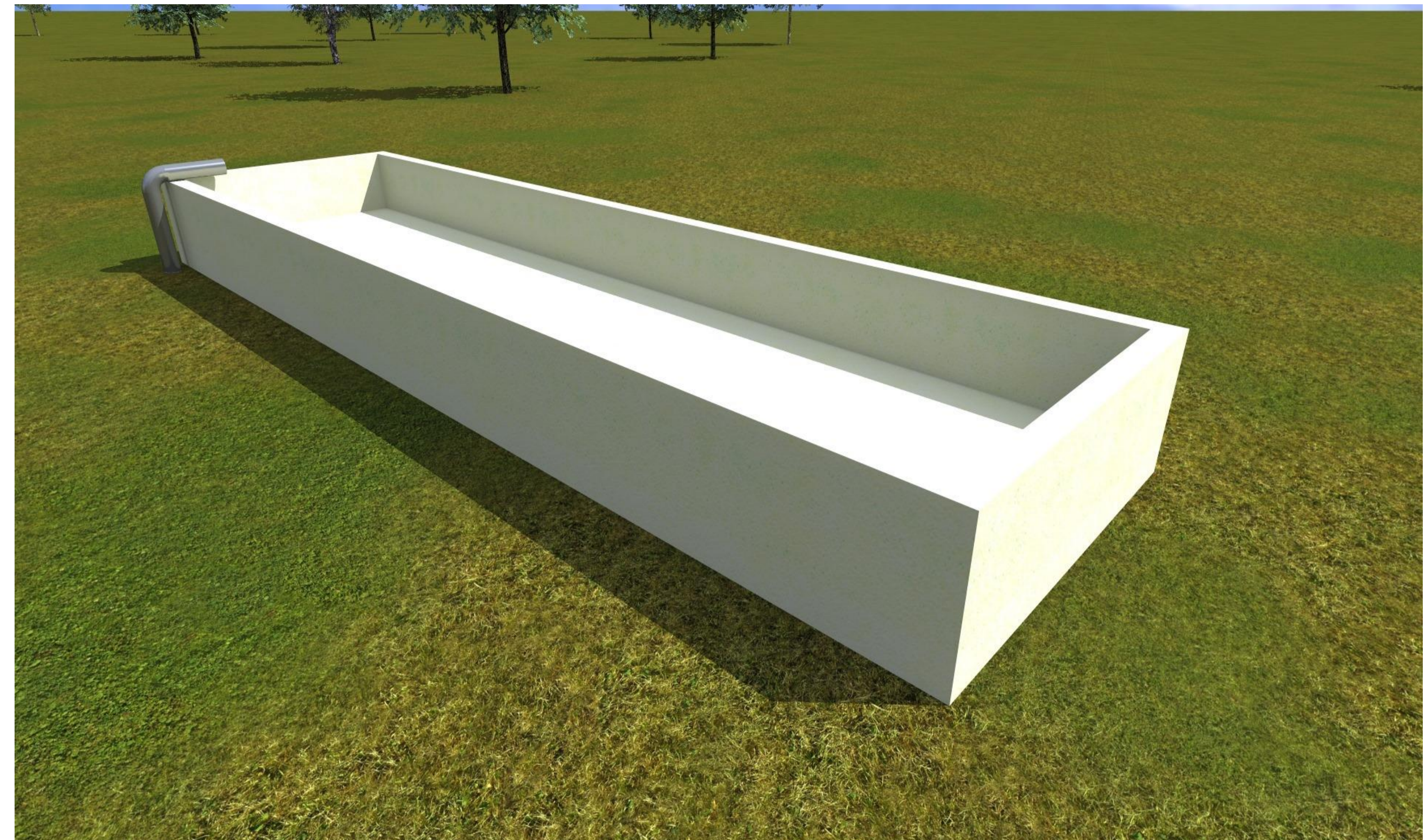
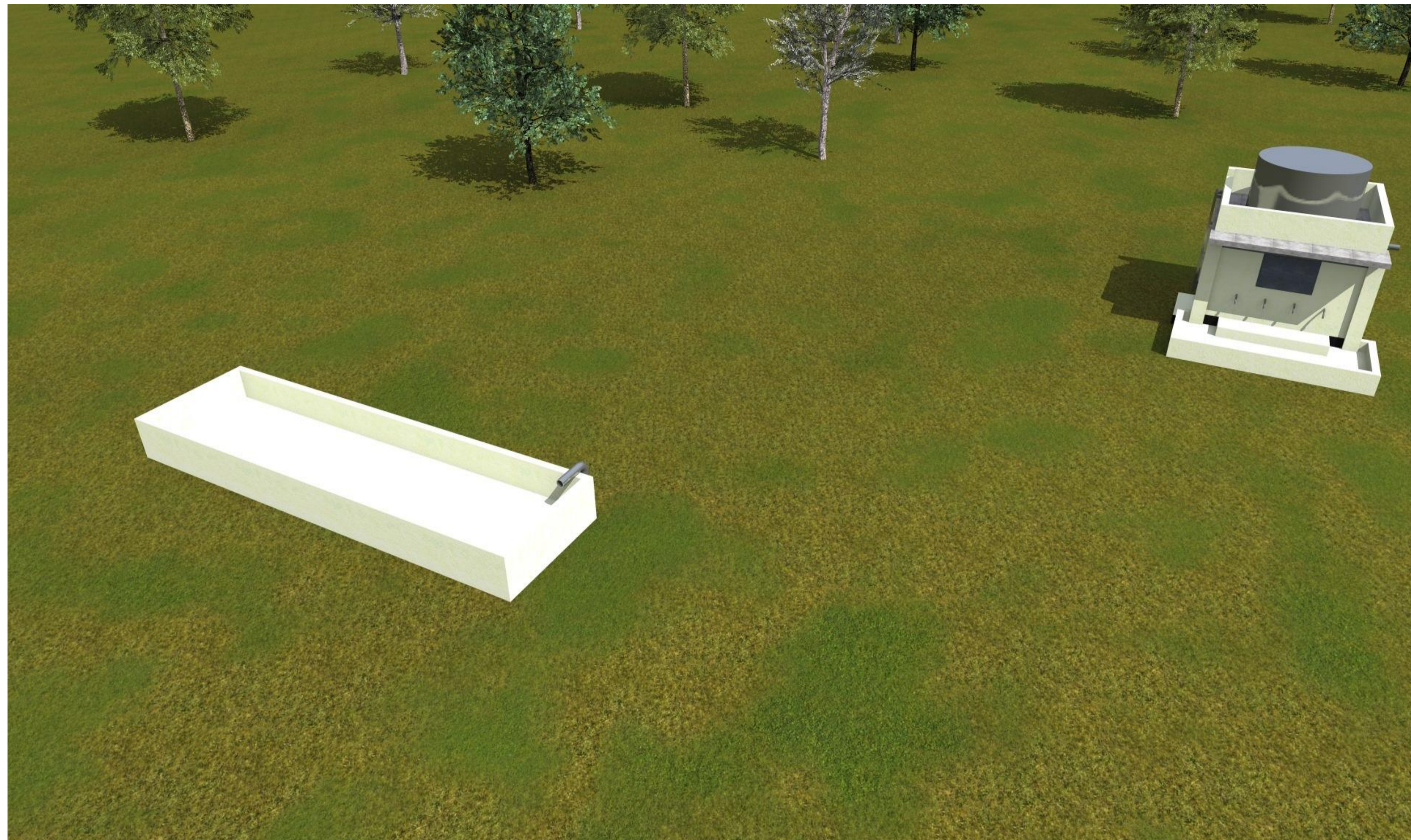


PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
LAYOUT

SCALE		DRAWING TITLE:
DATE	APRIL, 2017	
DESIGNED BY:	J. NANDWA	DRAWING N <sup>o</sup> :
DRAWN BY:	J. NANDWA	PROJECT N <sup>o</sup> :
REVIEWED BY:		
APPROVED BY:		

SHEET N<sup>o</sup>:  
**31 / 32**



PROJECT. PROPOSED BALANBAL BOREHOLE  
REHABILITATION  
-BALANBAL DISTRICT-

SHEET TITLE:  
3D Scenes

SCALE		DRAWING TITLE:
DATE	APRIL, 2017	DRAWING N <sup>o</sup> :
DESIGNED BY:	J. NANDWA	PROJECT N <sup>o</sup> :
DRAWN BY:	J. NANDWA	
REVIEWED BY:		
APPROVED BY:		

SHEET N<sup>o</sup>:  
**32 / 32**