

The New Anchor Post Product

From Anchor Systems

This revolutionary foundation system is new to the Garden Room market.

Benefit by using a foundation solution that is **quicker, more efficient, less costly and easier to install** than current methods.



Pictured: Wilmslow - 6 x 4m room with 4 x 1.5m shed on Anchor Post foundations

Our patented Anchor Post product requires a 1 person install and can be in position **within a few minutes**. No Concretes or Mortars, no complicated installation method and no large working areas required for installation.

London Underground have made construction efficiencies in the region of **400%** on construction projects. Since then, LU now use the Anchor Post as the foundation solution of choice for most trackside furniture.....



Garden Room and DIY enthusiasts have seen the benefits in the product and are now starting to take full advantage due to the simplistic installation method and easy access plant.

The Anchor Post was originally designed for carrying trackside cabling for London Underground.



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ANCHOR POSTS

Project Report



Temp/Permanent Structure - Anchor Post Foundation,

Client: Private Client
Contractor: Silver Contracting
Designer: ES Associates
Supply: 9No.1.0m Anchor Posts & Interface Plates
Date: August 2013

Requirement

Anchor Systems (Europe) Ltd (ASEL) were approached by ES Associates to design and supply a foundation for a permanent/temporary structure. The Log Cabin is 3.1m x 2.4m structure in plan and weighs approximately 750Kg dead weight. The structure is designed to withstand snow loading and other associated hazardous conditions. The maximum load when the structure is occupied with storage components is approximately 1250Kg. The log cabin is made up of dense



treated 28mm thick timber panels. The client required the foundations to be installed within a short period of time as access to the build area was increasingly congested and difficult to maintain. The site had stringent requirements for minimising environmental impact and limiting waste on site with regard to trades employed. Wet trades were discounted as an option on this site.



Solution

ASEL were engaged to supply the correct solution for the project based on the stringent site requirements. Once the interface plates for the timber foundation were designed and supplied with the patented anchor post

solution; the anchor posts were positioned and driven into the ground in 45 mins to line and level. Silver Contracting used ASEL's specialist hand held installation equipment designed to be portable expressly for hard access sites. The foundation timber was laid and secured on the anchor posts in a further 2hrs. The assembly and fit out of the log cabin took a total of 4 days with a 2 person crew. ASEL understood the nature of the site and exacting client's requirements. The anchor post foundation solution offers up to a 50 year design life, with the opportunity of removing the foundations just as easily as the installation process should the need arise, Environmental impact is deemed to be negligible.



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Anchor Post garden room Foundation



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Cert No.6087
 ISO 9001



Registered

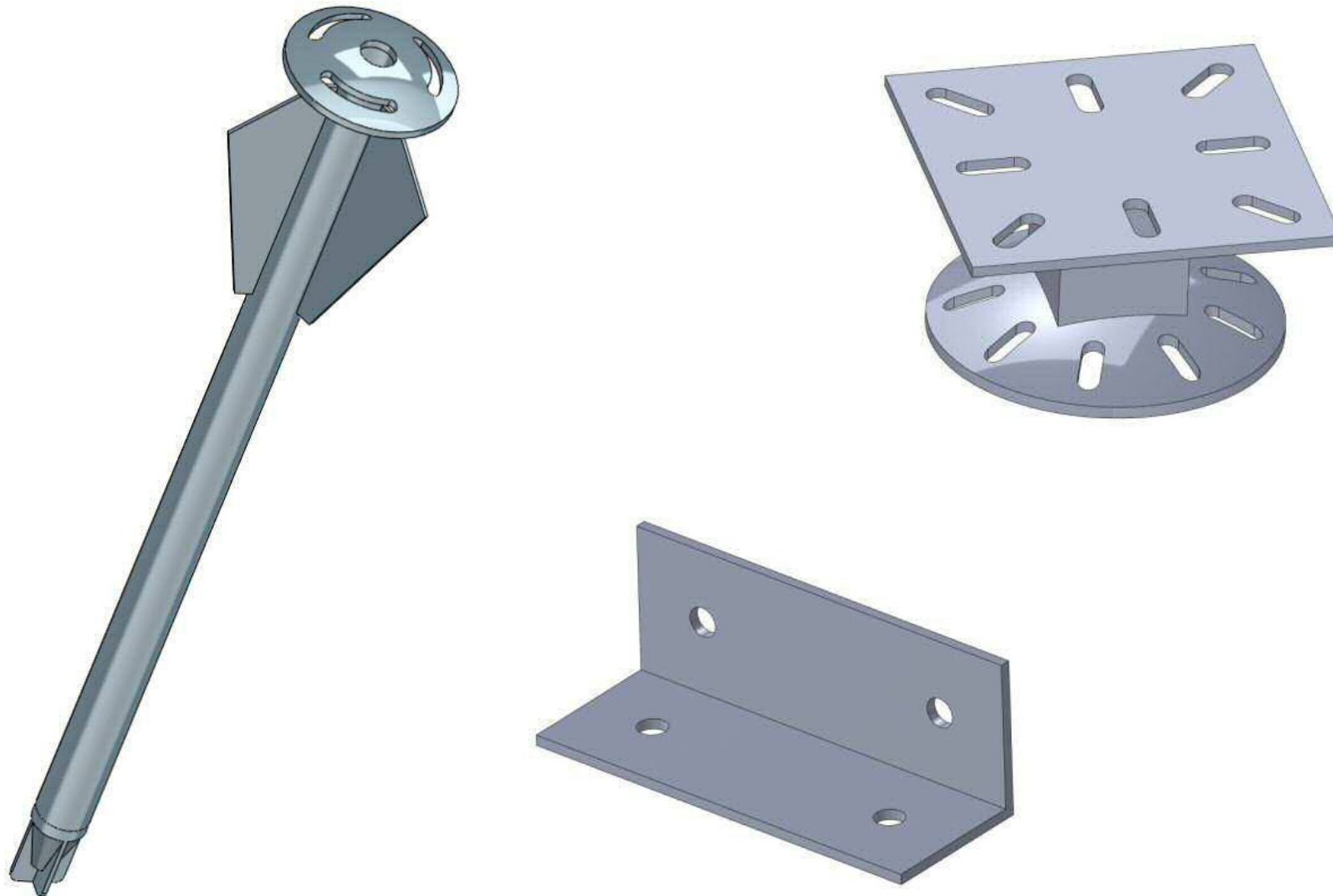


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Anchor Posts Log Cabin Foundation



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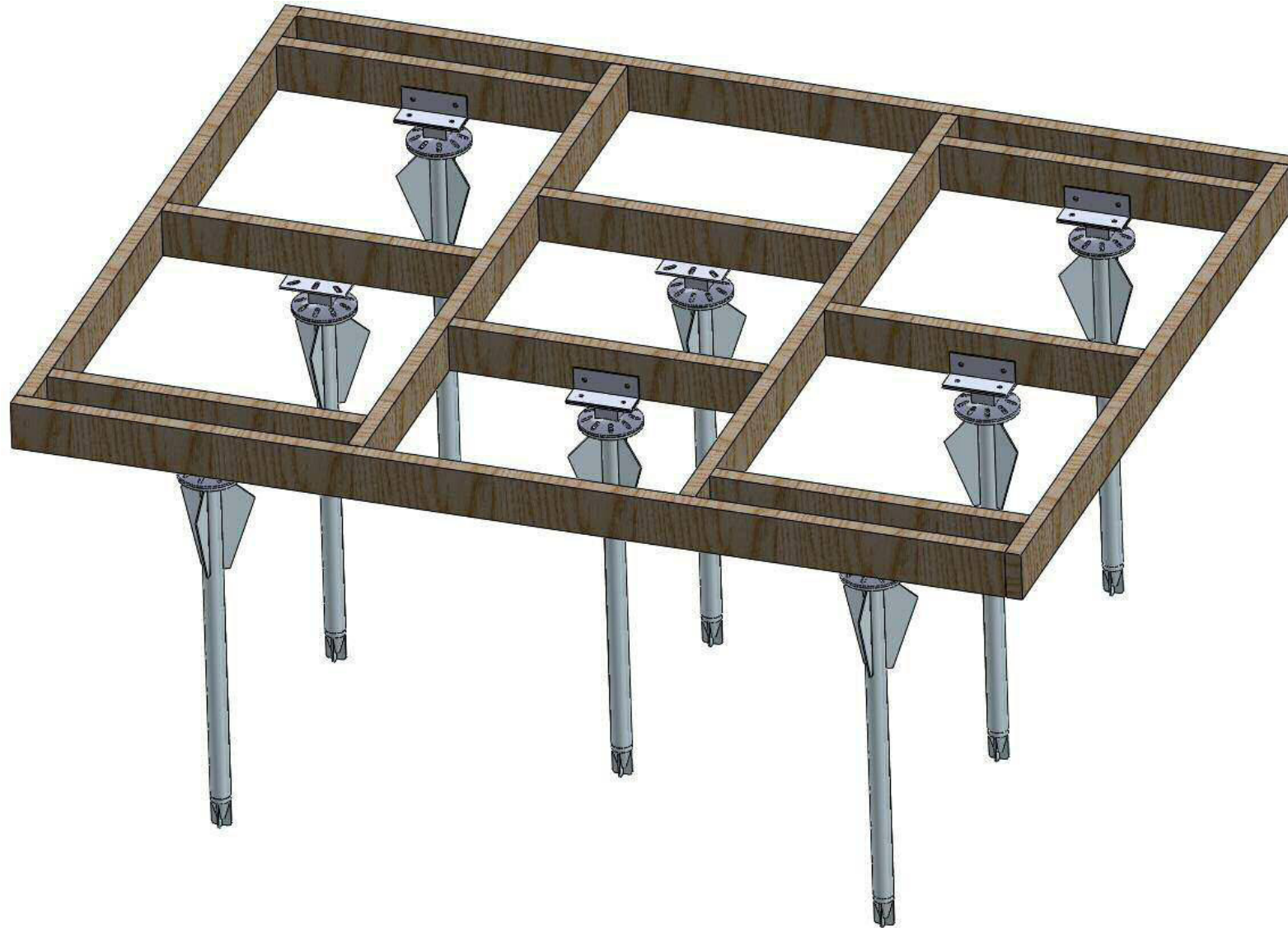
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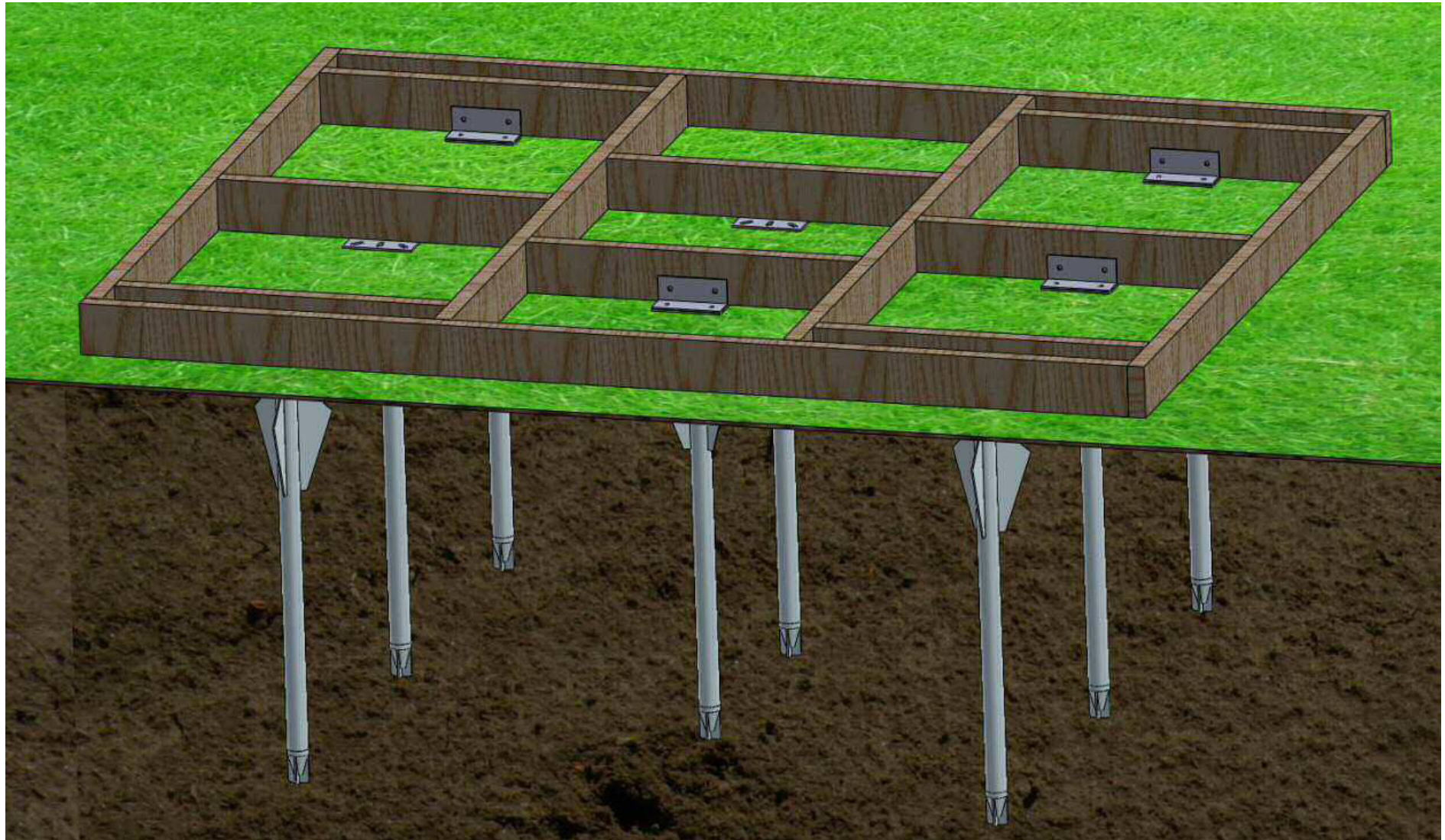
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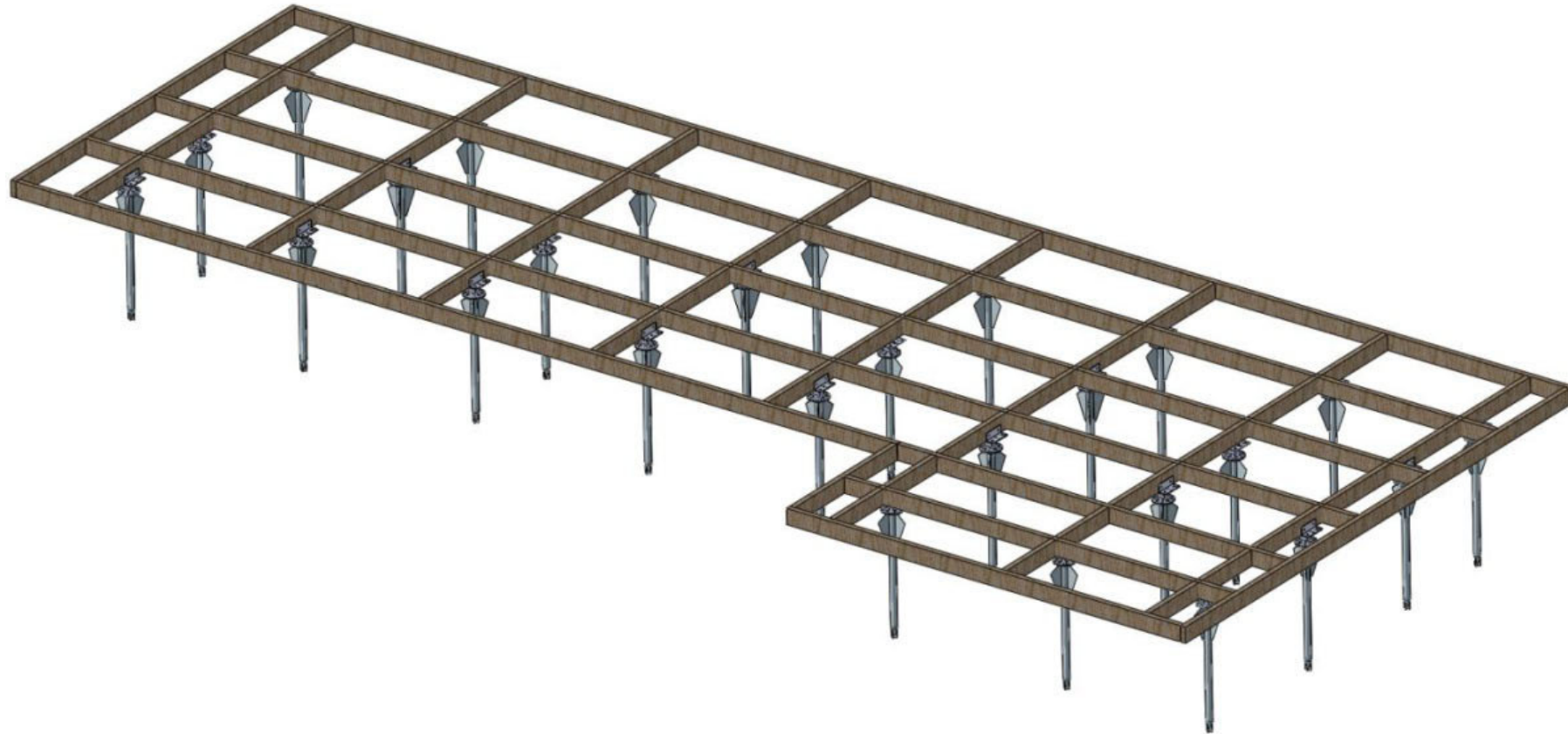


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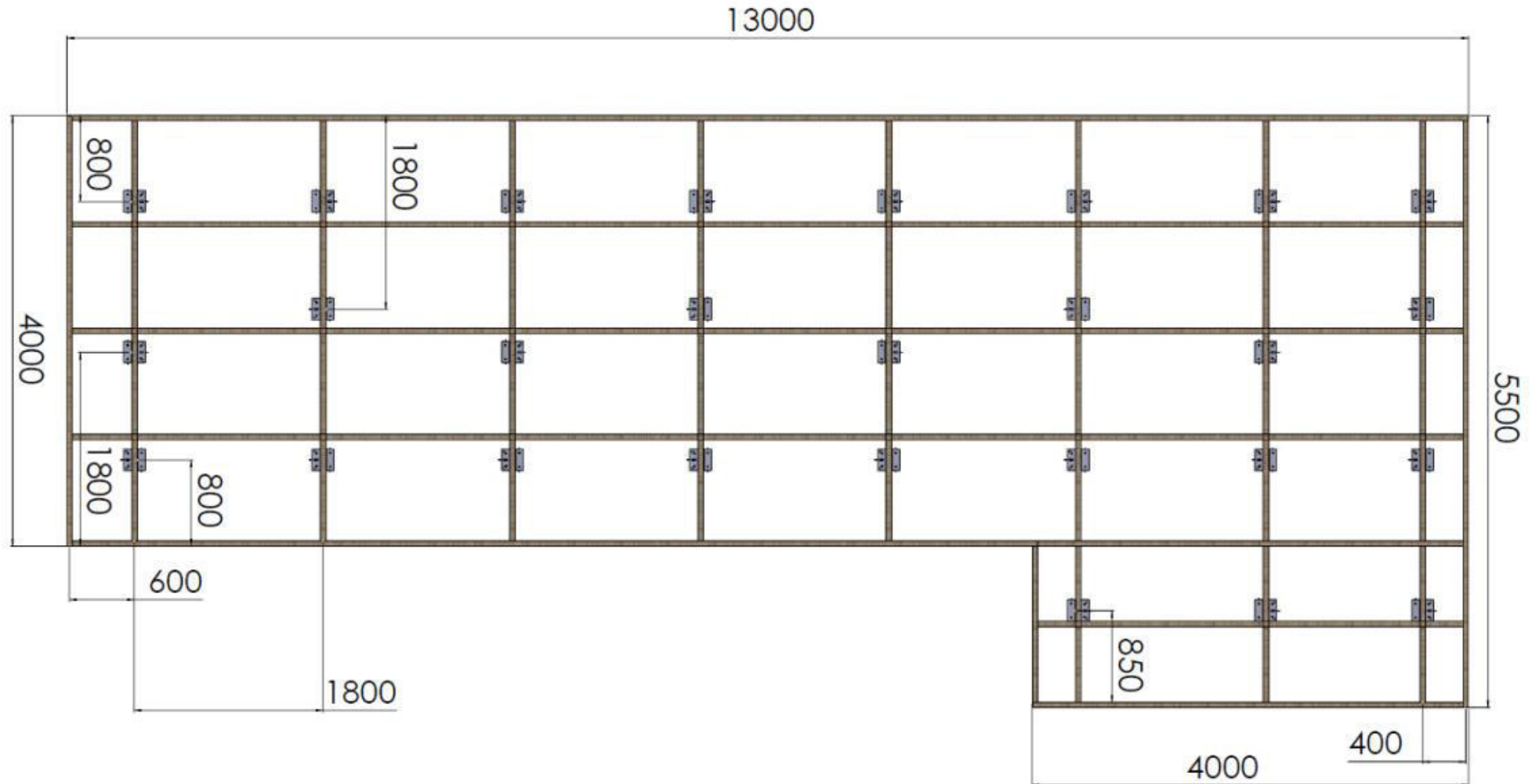


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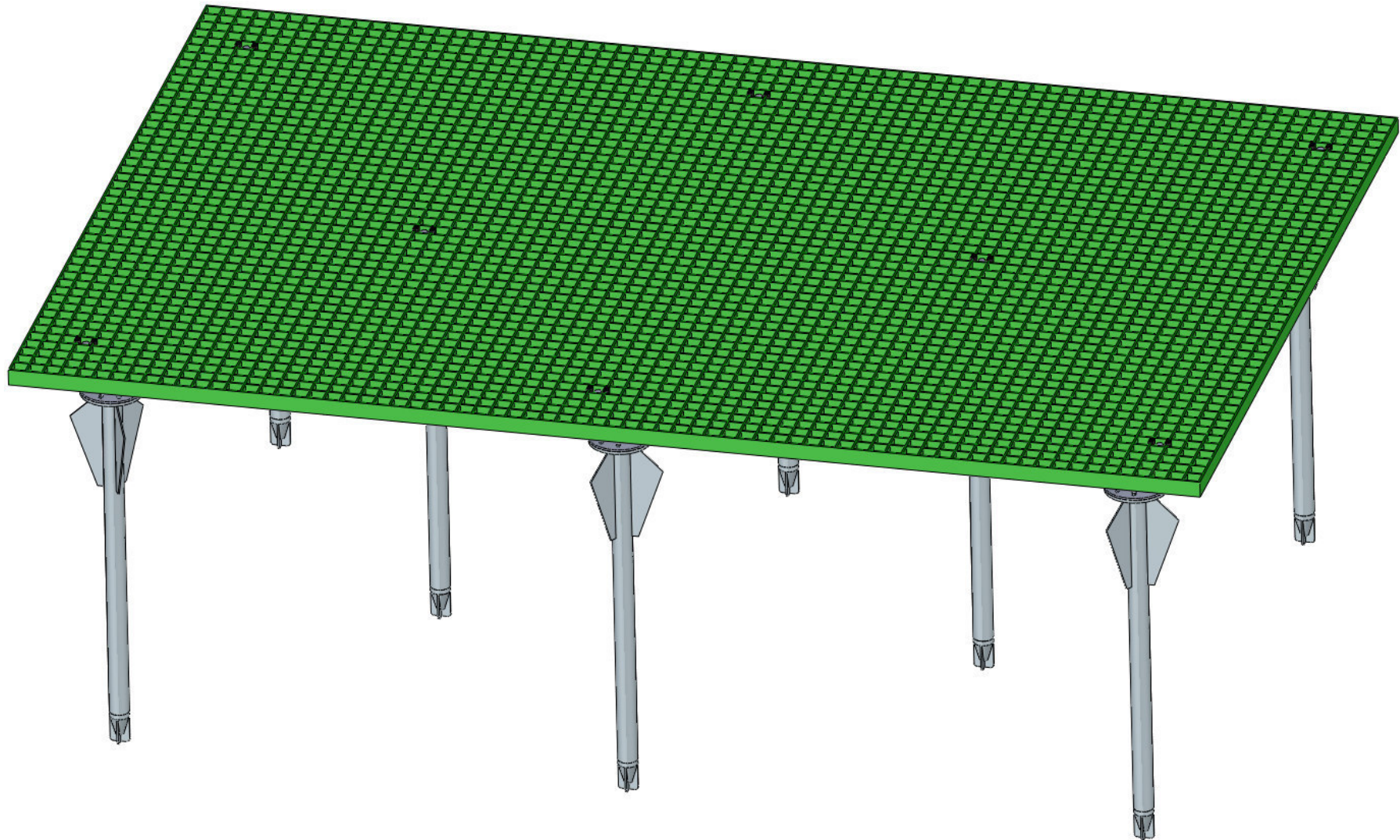


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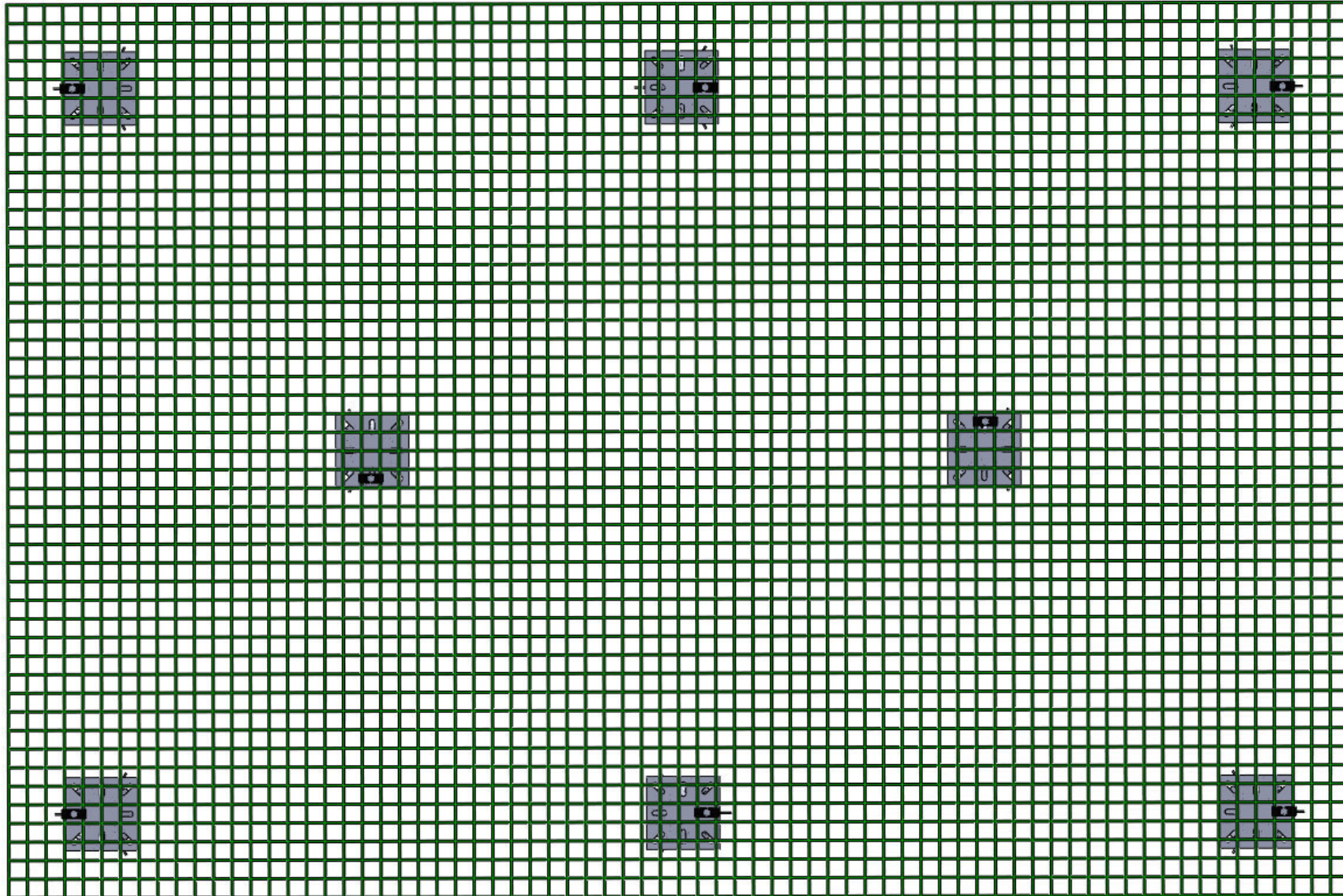
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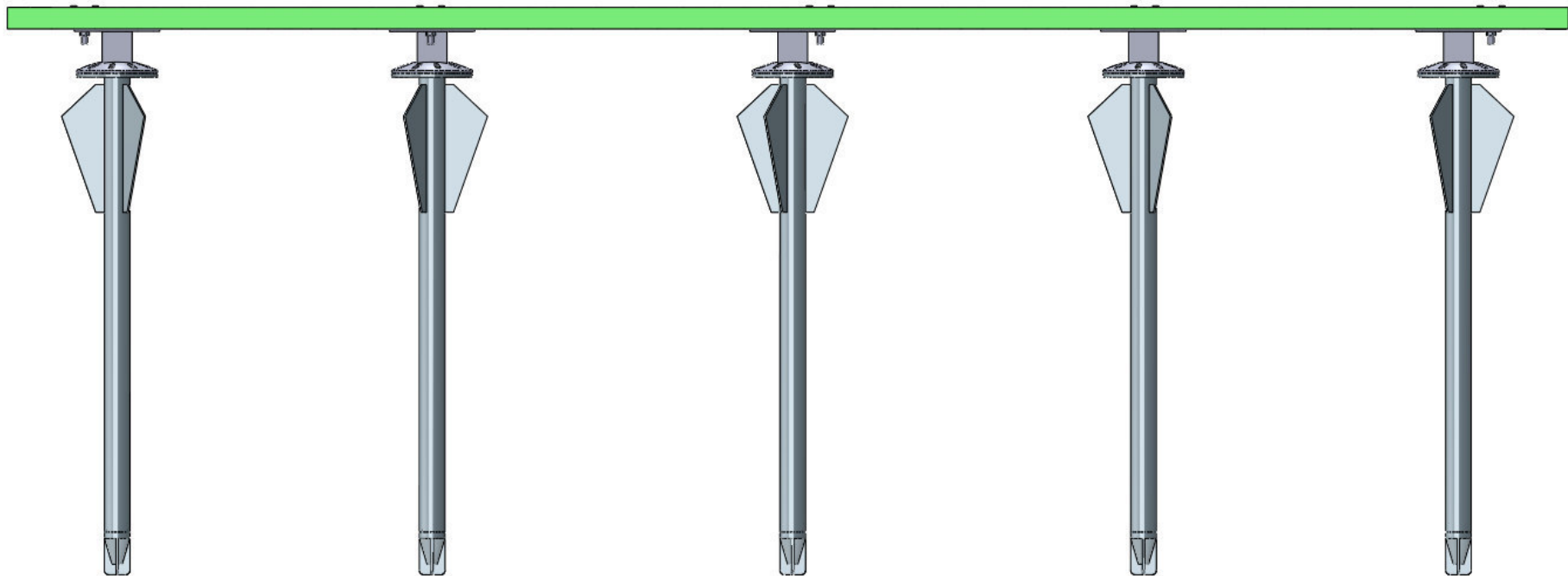
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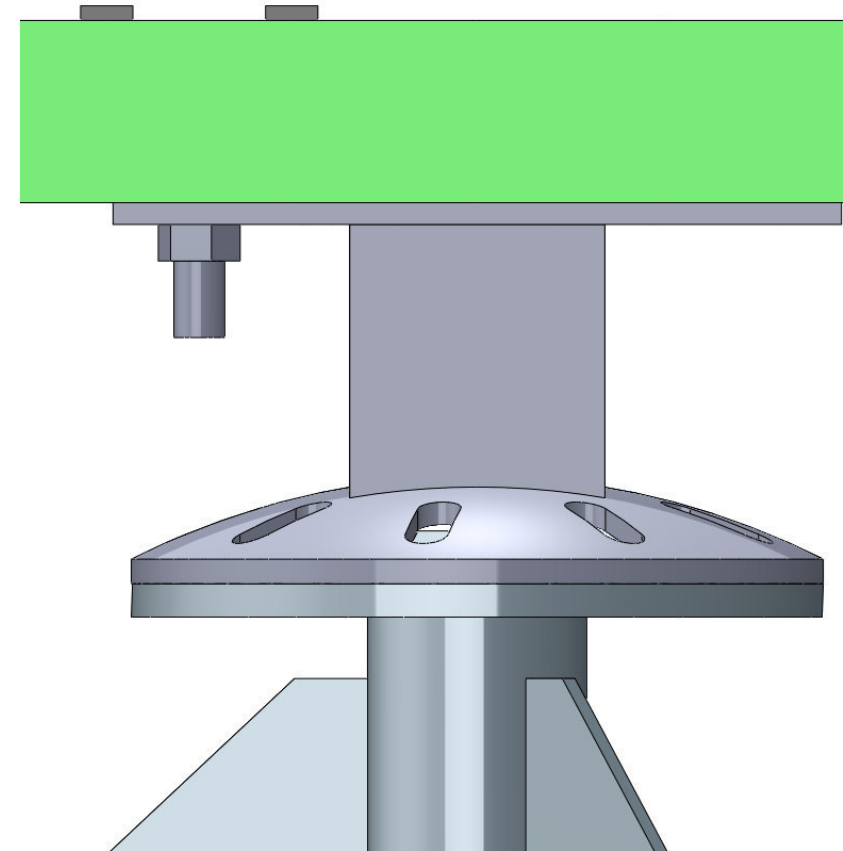
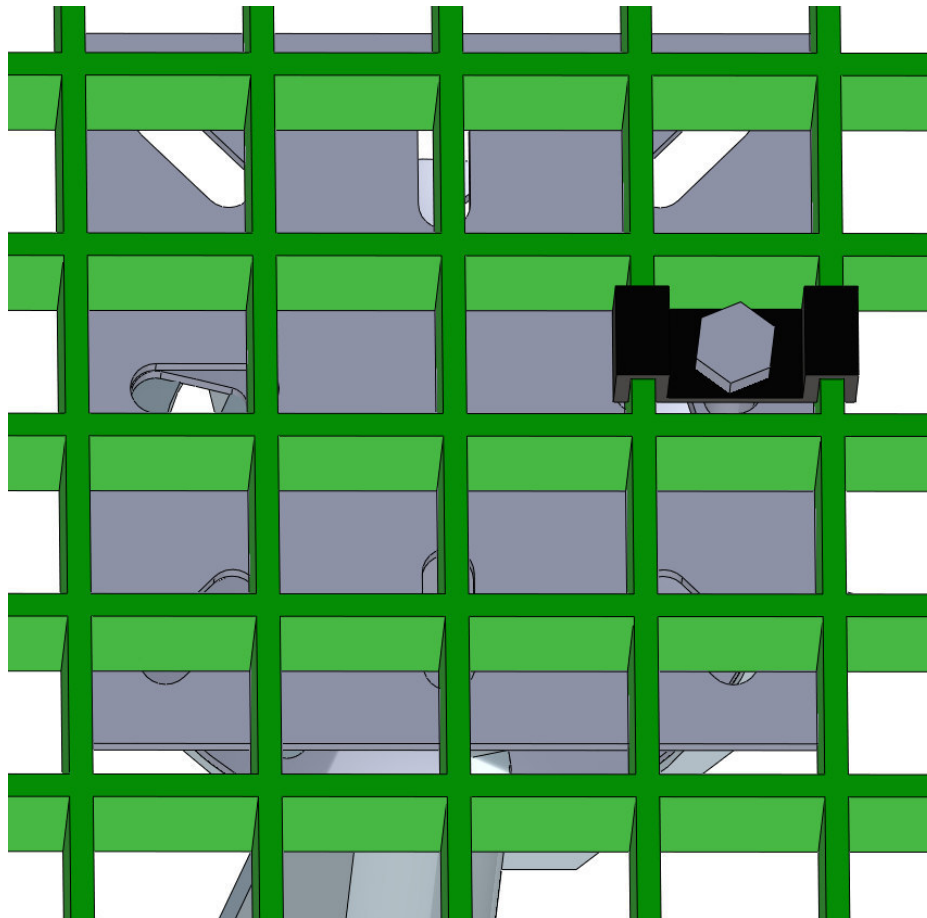
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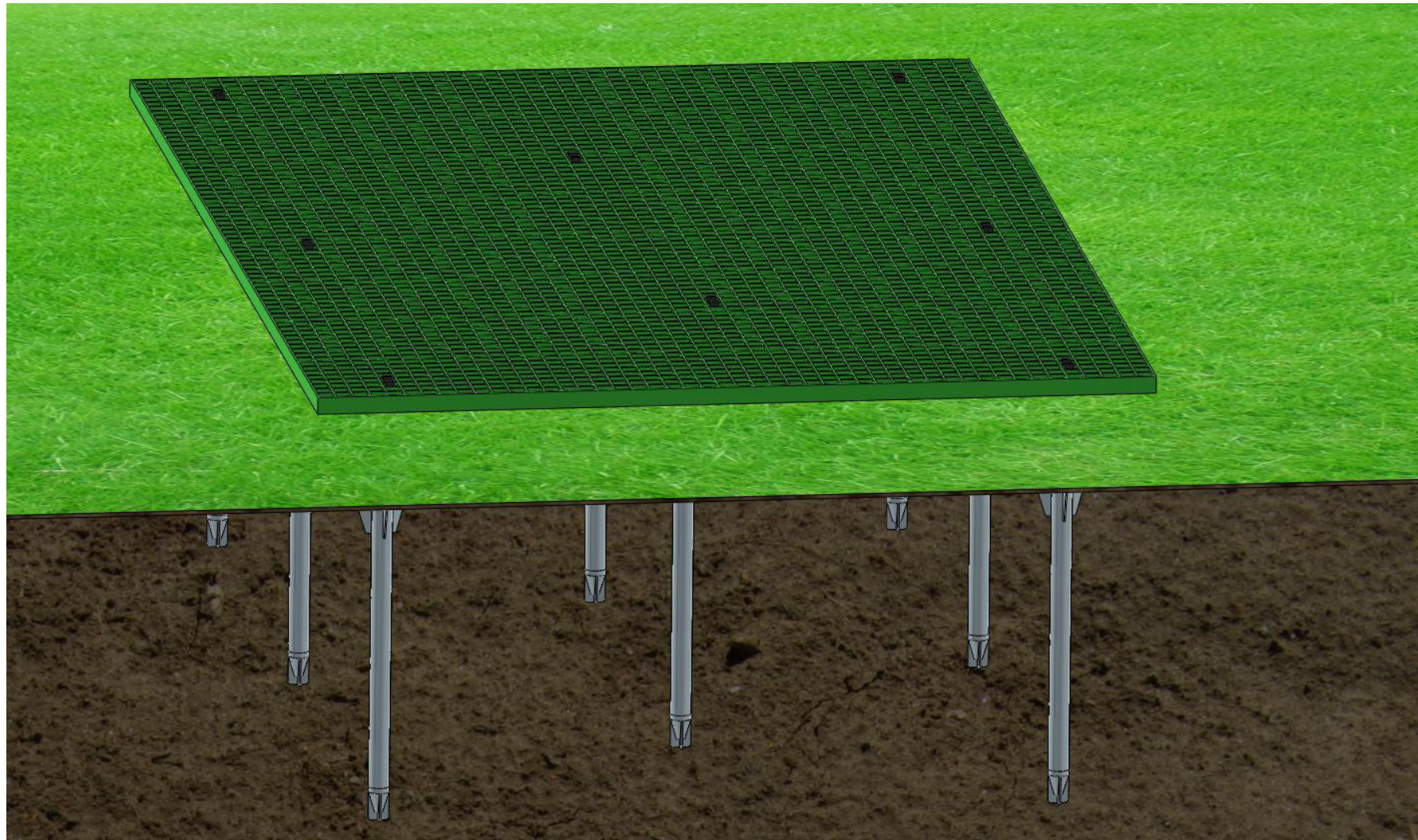
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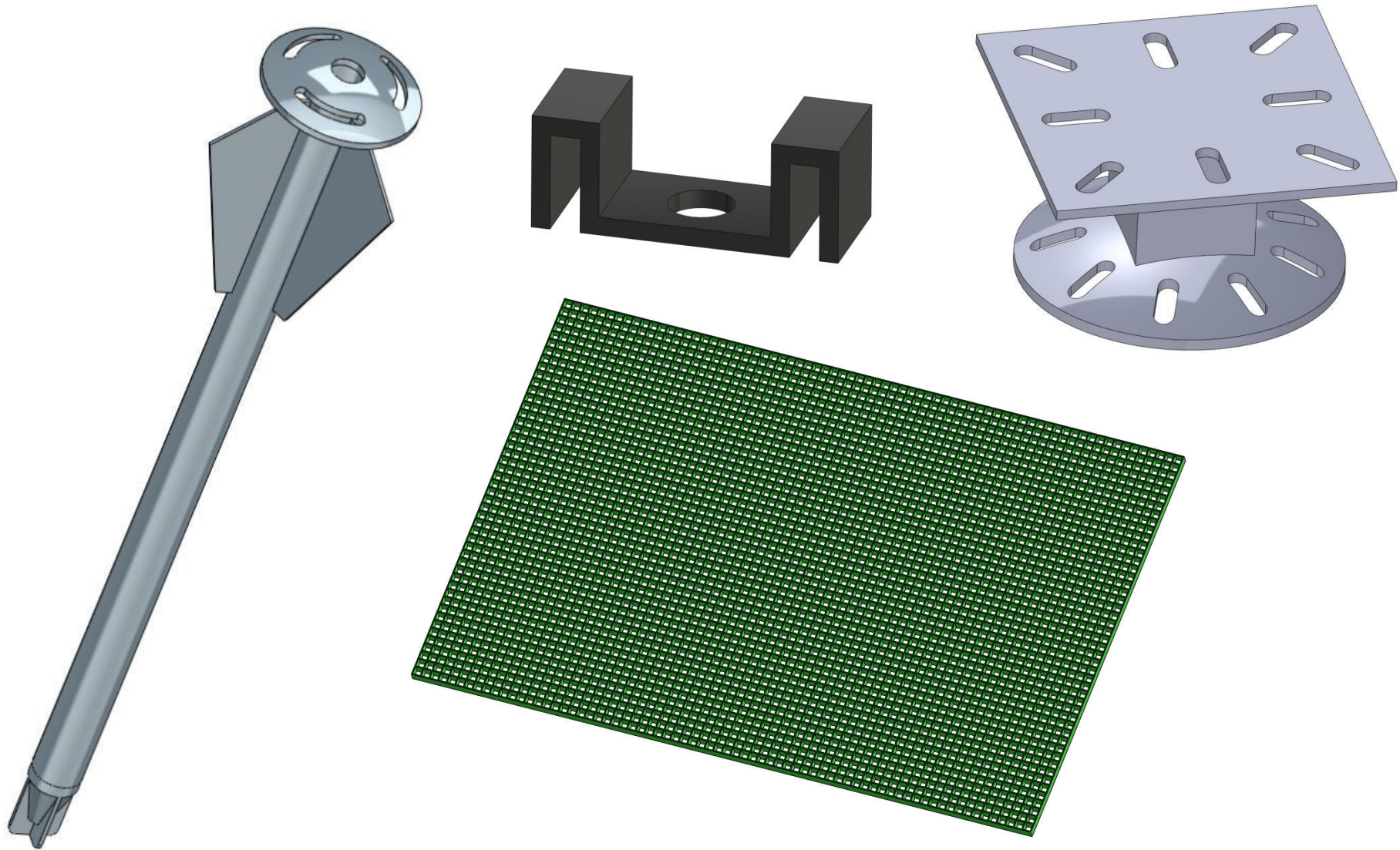
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6 Recommended Vertical Design Resistances for Anchor Posts

The results of the calculations are summarised in Tables 6.1 to 6.4 below. The **recommended design resistances, R_d** , include the appropriate partial resistance factors and model factors stated in the structural Eurocodes. These design resistances *must* be compared with the *factored* design actions, F_d , incorporating the partial factors on actions from set A2 (i.e. $\gamma_G = 1.00$ and $\gamma_Q = 1.30$ on permanent and variable actions respectively).

Table 6.1 – Compressive design resistance $R_{c;d}$ for Anchor Posts in coarse soils (dry)

Soil Classification BS EN1997-2	$\phi'_{;k}$ (°)	1.0m Anchor Post		1.2m Anchor Post		1.5m Anchor Post	
		R_{cd} (kN)	R_{cd-max} (kN)	R_{cd} (kN)	R_{cd-max} (kN)	R_{cd} (kN)	R_{cd-max} (kN)
Loose	30	1.0	1.7	1.7	2.7	4.2	6.8
Medium dense	32	1.3	2.1	2.2	3.5	5.1	8.7
	34	1.6	2.8	2.7	4.5	6.1	11.1
Dense	36	2.0	3.6	3.6	5.9	7.6	14.3
	38	2.7	4.8	4.8	7.9	9.6	18.5
Very dense	40	3.7	6.5	6.7	10.8	12.7	24.2

Table 6.2 – Tensile design resistance $R_{t;d}$ for Anchor Posts in coarse soils (dry)

Soil Classification BS EN1997-2	$\phi'_{;k}$ (°)	1.0m Anchor Post		1.2m Anchor Post		1.5m Anchor Post	
		R_{td} (kN)	R_{td-max} (kN)	R_{td} (kN)	R_{td-max} (kN)	R_{td} (kN)	R_{td-max} (kN)
Loose	30	0.6	1.1	1.0	1.7	2.8	4.8
Medium dense	32	0.7	1.3	1.1	2.1	3.2	6.0
	34	0.8	1.7	1.3	2.6	3.6	7.4
Dense	36	0.9	2.1	1.4	3.3	4.1	9.2
	38	1.0	2.5	1.6	4.0	4.6	11.3
Very dense	40	1.2	3.1	1.8	5.0	5.2	14.0

Table 6.3– Compressive design resistance $R_{c;d}$ for Anchor Posts in fine soils

Strength description BS EN1997-2	$c_{u;k}$ (kPa)	1.0m Anchor Post		1.2m Anchor Post		1.5m Anchor Post	
		$R_{cd-0.5m}$ (kN)	$R_{cd-0.0m}$ (kN)	$R_{cd-0.5m}$ (kN)	$R_{cd-0.0m}$ (kN)	$R_{cd-0.5m}$ (kN)	$R_{cd-0.0m}$ (kN)
Low strength	20	1.0	2.5	1.6	3.3	4.4	6.0
Medium strength	40	2.0	5.0	3.3	6.6	8.9	12.1
High strength	75	3.2	8.1	5.4	10.7	14.3	19.4
	100	3.9	9.6	6.5	12.7	17.0	22.9

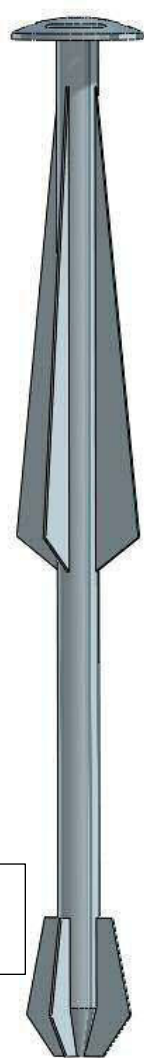
Table 6.4 – Tensile design resistance $R_{t;d}$ for Anchor Posts in fine soils

Strength description BS EN1997-2	$c_{u;k}$ (kPa)	1.0m Anchor Post		1.2m Anchor Post		1.5m Anchor Post	
		$R_{td-0.5m}$ (kN)	$R_{td-0.0m}$ (kN)	$R_{td-0.5m}$ (kN)	$R_{td-0.0m}$ (kN)	$R_{td-0.5m}$ (kN)	$R_{td-0.0m}$ (kN)
Low strength	20	0.6	1.8	1.1	2.3	3.2	4.4
Medium strength	40	1.3	3.6	2.1	4.7	6.4	8.8
High strength	75	2.0	5.7	3.4	7.5	10.2	14.1
	100	2.4	6.7	4.0	8.8	12.0	16.6

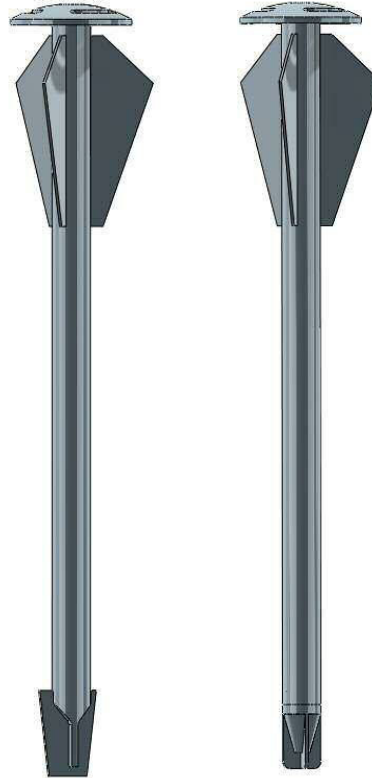
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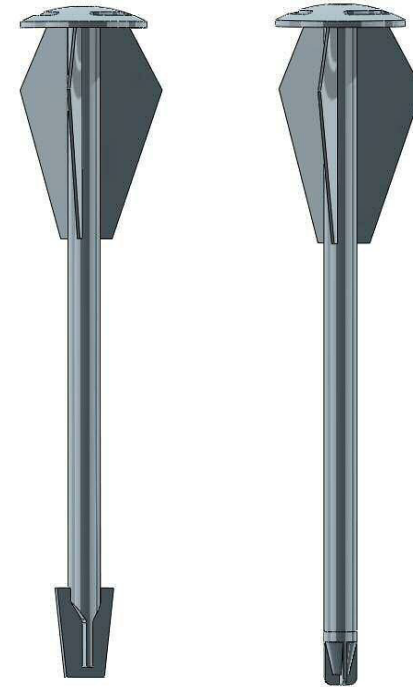
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1500mm
Anchor Post



1200mm
Anchor Post



1000mm
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Figure 5.2.1 - 1.0m Anchor Post pile model

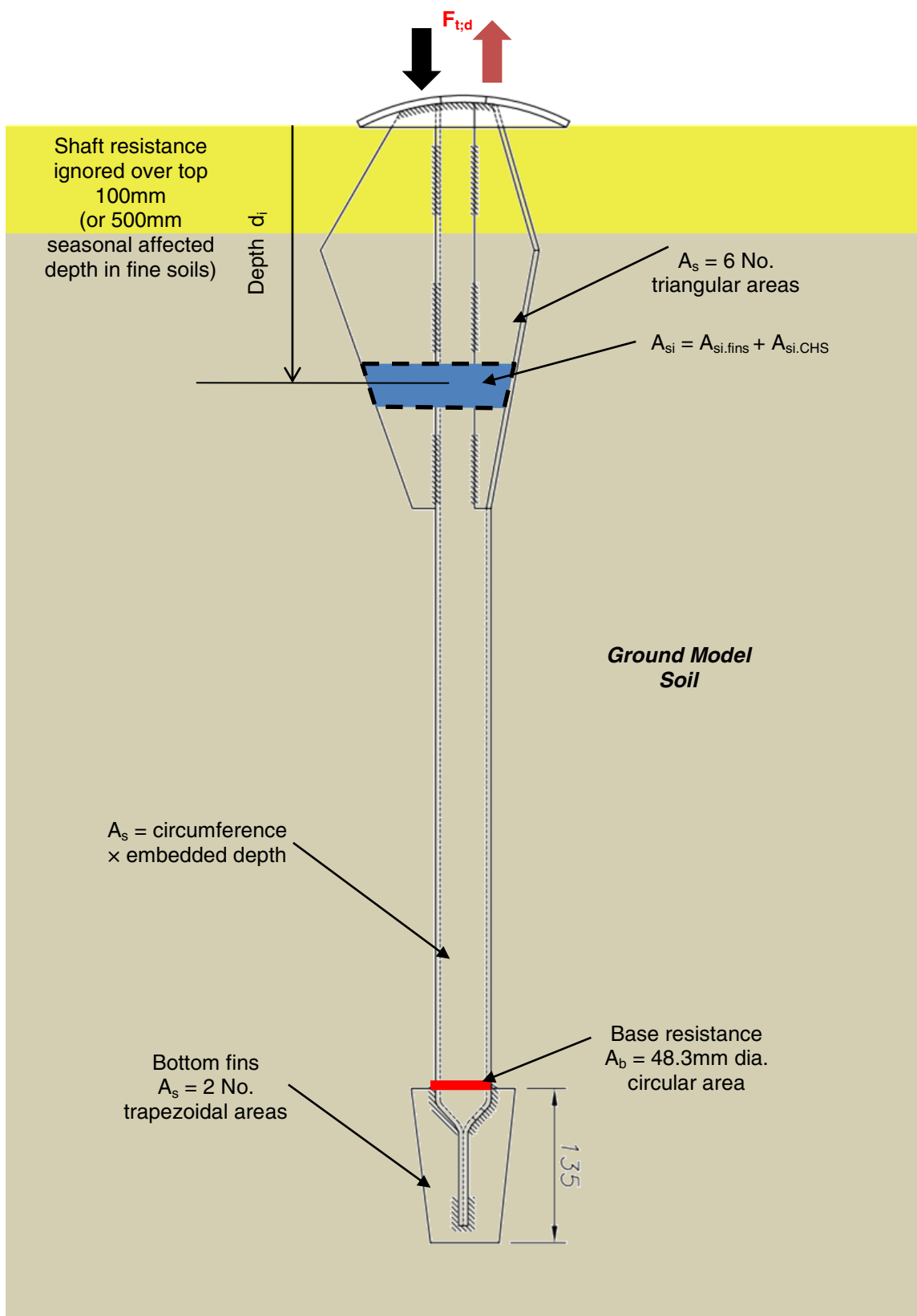


Figure 5.2.2- 1.2m Anchor Post pile model

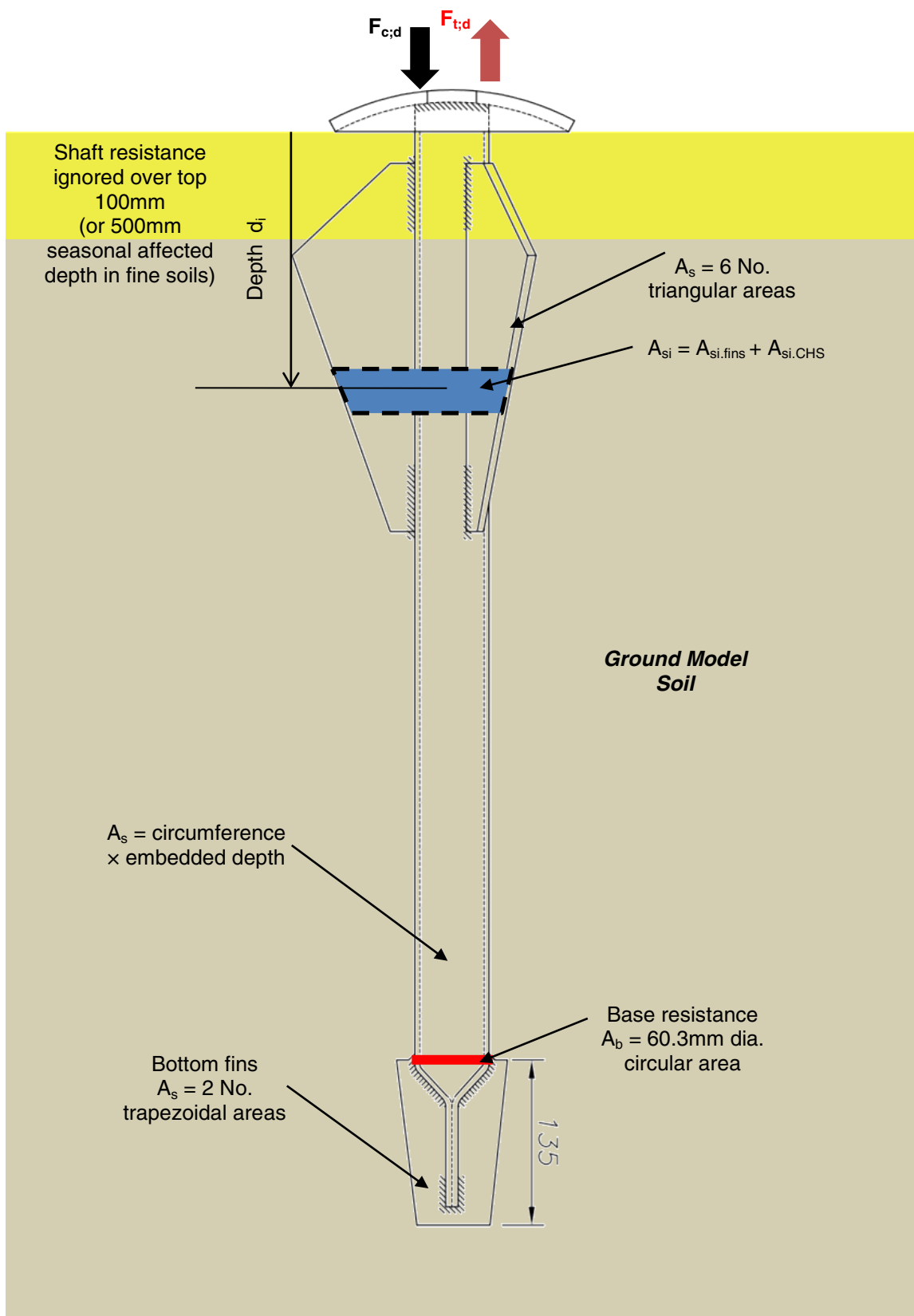


Figure 5.2.3 - 1.5m Anchor Post pile model

