

OUTER FENCING DETAILS

L E G E N D

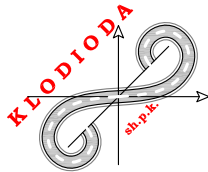
Security upgrade of Ministry of Interior (Mol) Main Supply Centre “Mullet”- -Small Arms Light Weapons(SALW) and ammunition storage location, Second Phase

DETAILED DESIGN

OUTER FENCING DETAILS



UNITED NATIONS
DEVELOPMENT
PROGRAMME
ALBANIA

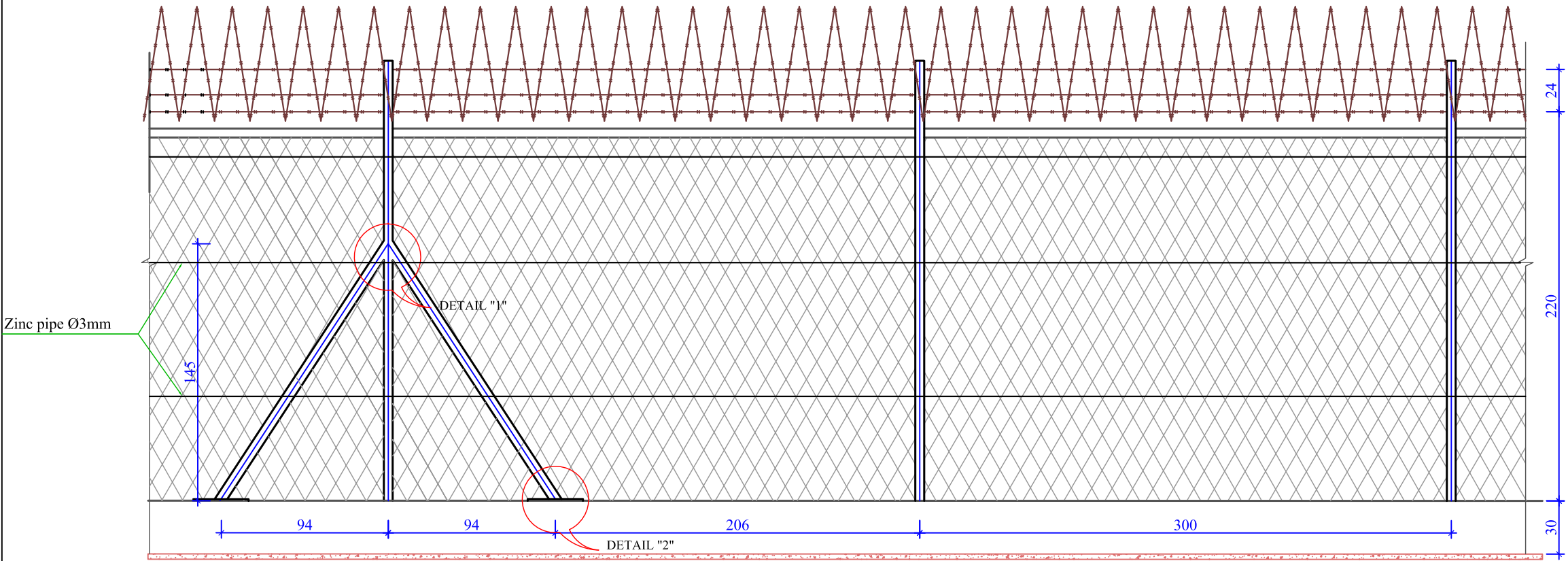


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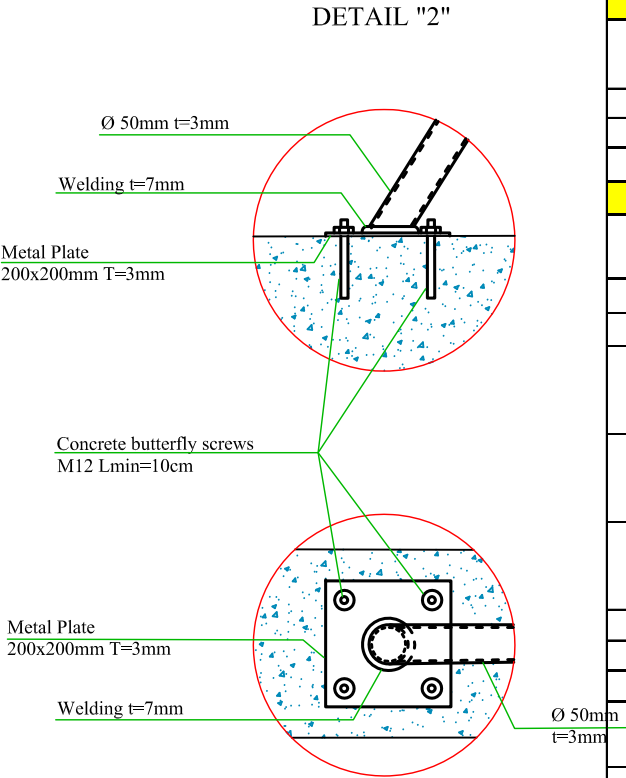
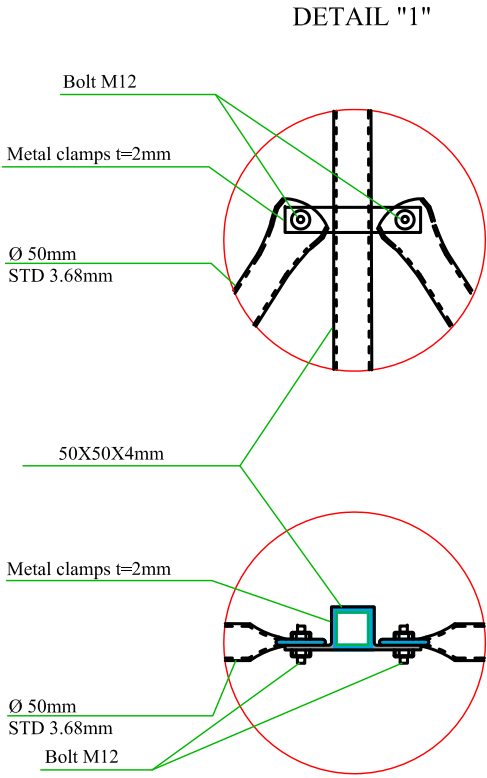
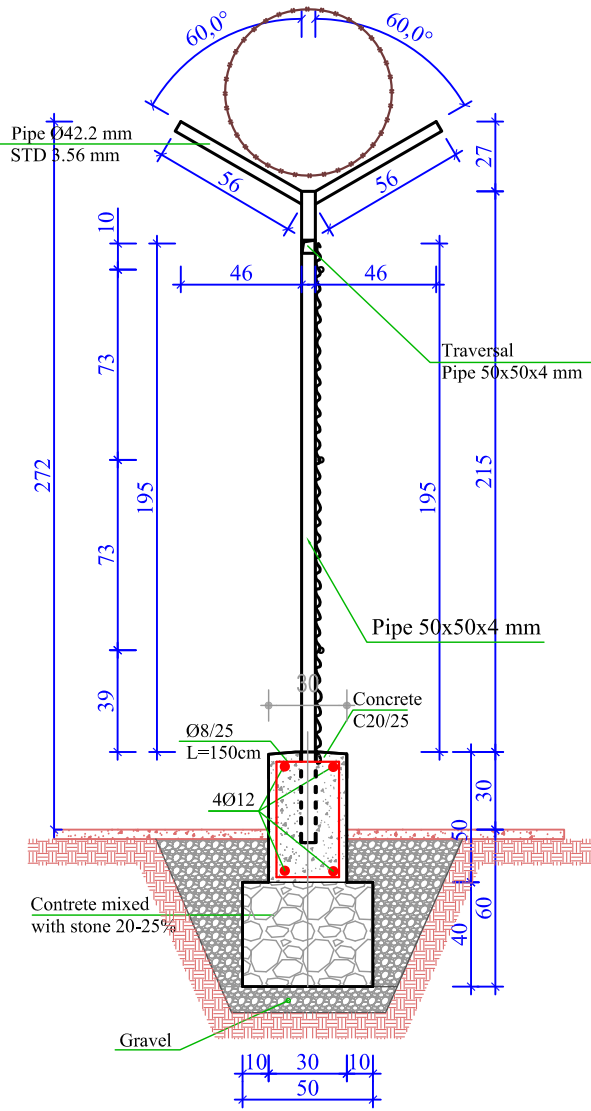
FENCING VIEW
Sc 1:30



Technical Notes:

The outer fence is foreseen to be made with steel pipes vertical elements, □ section 50x50x4mm while the upper part is provide to be made with Ø 40mm iron pipes with a "V" shape. The vertical pipes are embedded in 30cm concrete. The foundation siege has a height of 30cm above the Earth's surface, 3mm diameter rhombic gabion wire meshes with 50-60mm rhombus apertures and 200cm mesh overall height. The tubes are closed at the top. Across the grid height are provided 3 rows of Ø 3mm wire which is fixed from column to column describing the grid and keeping it taut after the columns. In the bent part of the columns are placed 3 rows of barbed wire. It is envisaged that the gabion mesh will be inserted 5 cm into the concrete of the foundation siege. The demolition of the existing fencing should be done in parallel with the realization of the new fencing, to ensure the safety of gabion and during the construction phase.

FENCING SECTION
Sc 1:30



VOLUMES TABLE FOR FENCING, UNITS - LENGTH (/ ML)							
Foundation/ml							
No.	Weak foundation	ELEMENT	SURFACE	QUANTITY	LENGTH	VOLUME TOT	
			m ²	Piece	m	m ³	
1		Concrete C20/25 for curbs	0.12	1	1	0.12	
2		Contrete mixed with stone	0.20	1	1	0.20	
Fencing/ ml							
No.	Fencing Additional	ELEMENT	GJATESIA	QUANTITY	WEIGHT/UNITS	VOLUME TOT	
			m	Piece	kg/m	kg	
1		Pipe 50x50x4mm	1.56	1	5.78	8.99	
2		Pipe d=42.2mm, t=3.56mm	0.37	1	3.74	1.40	
3		Pipe d = 50, t = 3.68mm, reinforcements in the longitudinal direction / 18m	0.19	1	4.44	0.86	
4		Profile 30x30x3mm, reinforcements in transverse direction / 9m	0.52	1	2.54	1.33	
		Column with profile 60x60x4mm, reinforcements in transverse direction / 9m	0.28	2	7.03	3.91	
6		Other extras	5%			0.82	
		QUANTITY					17.31
	</						

[illegible]

Technical drawing of a square pile foundation cross-section. The pile is 30 cm wide and 60 cm high. It is made of concrete C20/25 and contains two 12 mm diameter reinforcement bars (2 Ø12). The pile is embedded in a concrete mixed with 20-25% stone, which is further embedded in a gravel layer. The dimensions are: 10 cm for the top concrete layer, 30 cm for the pile height, 40 cm for the gravel layer, and 60 cm for the total height of the pile and top concrete layer. The pile is shown with a cross-section of 30 cm by 30 cm.

The diagram consists of two parts. The top part shows a 3D perspective of a vertical rectangular steel column intersecting a diamond-shaped steel mesh. A red V-shaped line on the mesh indicates the connection point. A green line points to a circular mesh stranded wire. A green hook is shown on the wire, labeled 'Wire hook for fixing'. The bottom part shows a 3D perspective of a horizontal transversal pipe intersecting the same steel mesh. Red lines on the mesh indicate the connection points between the pipe and the mesh.

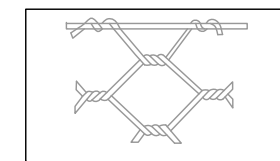
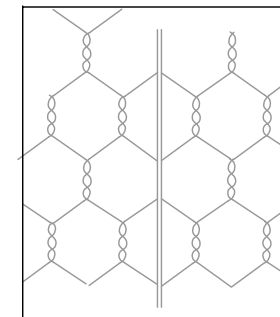
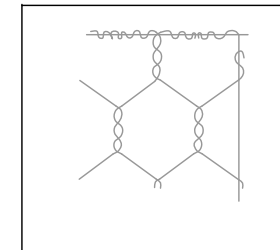
Steel column

Connection between columns and steel mesh with wire

Mesh stranded wire

Wire hook for fixing

Connection between transversal pipe and steel mesh



In addition to the garden accessories surround in the transversal direction, take in consideration to strengthen of its rigidity, is provided to use columns with section 60x60x4mm while the part of the truss structure elements is provided by elements with section 30x30x3mm. Connection between elements is provided to done by welding. The column elements are provide to anchored inside the foundation not less than 35cm the The truss columns will be connected to the foundations by support plate fixed with anchor bolts.

The resistance will be $=, <$ then 5Ω .

EARTHING CONDUCTOR

Fixed with welding

Stirrups Bar Ø8/ 50cm

Earthing Conductors Ø10
the joint will be welded min=12cm

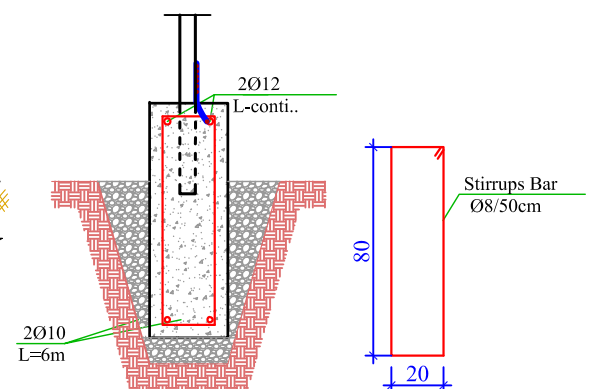
Electric Distribution Box
196x152x70

2 Ø12
L-cont..

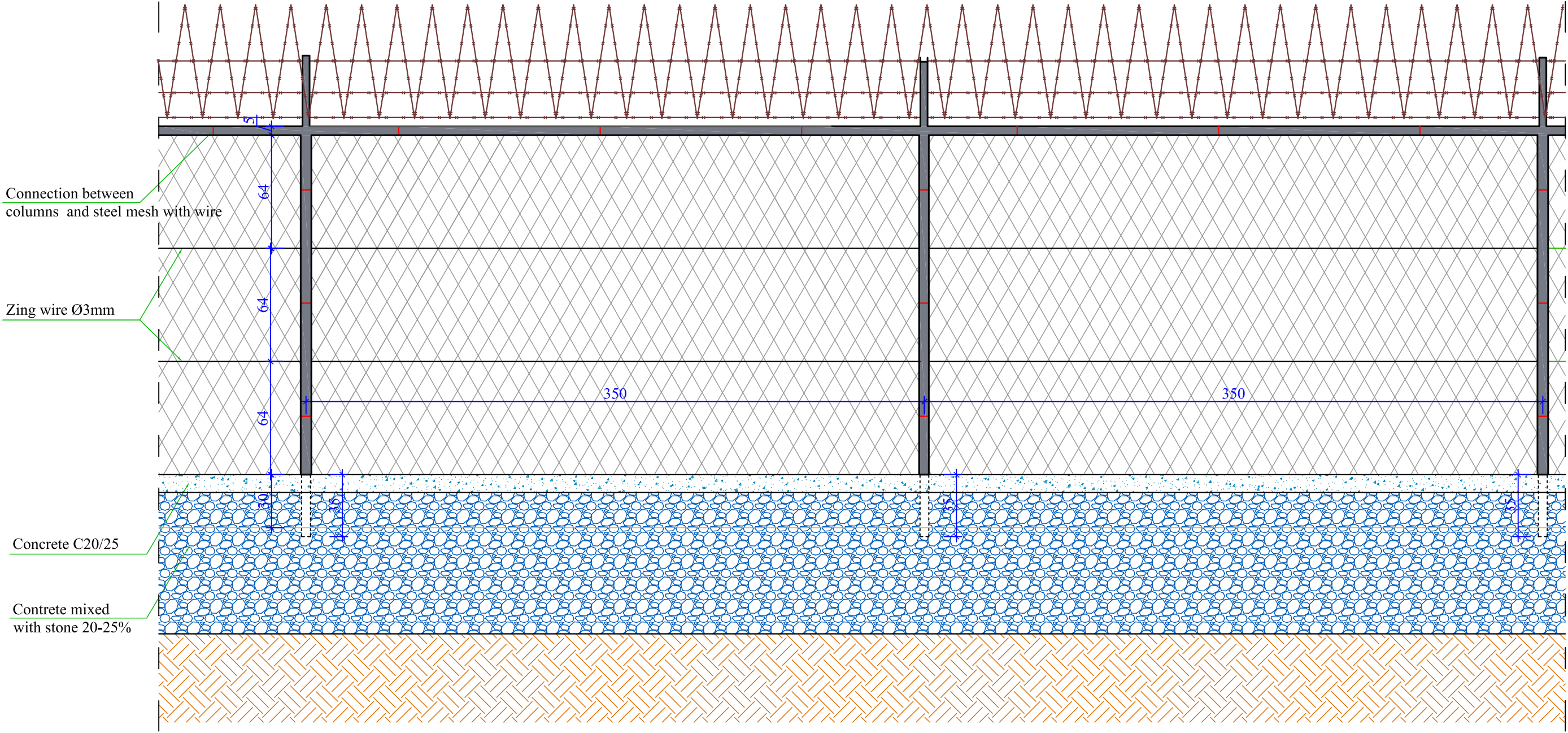
2 Ø10
L=6m/25m

Welding
Fixe

50 50 50 600

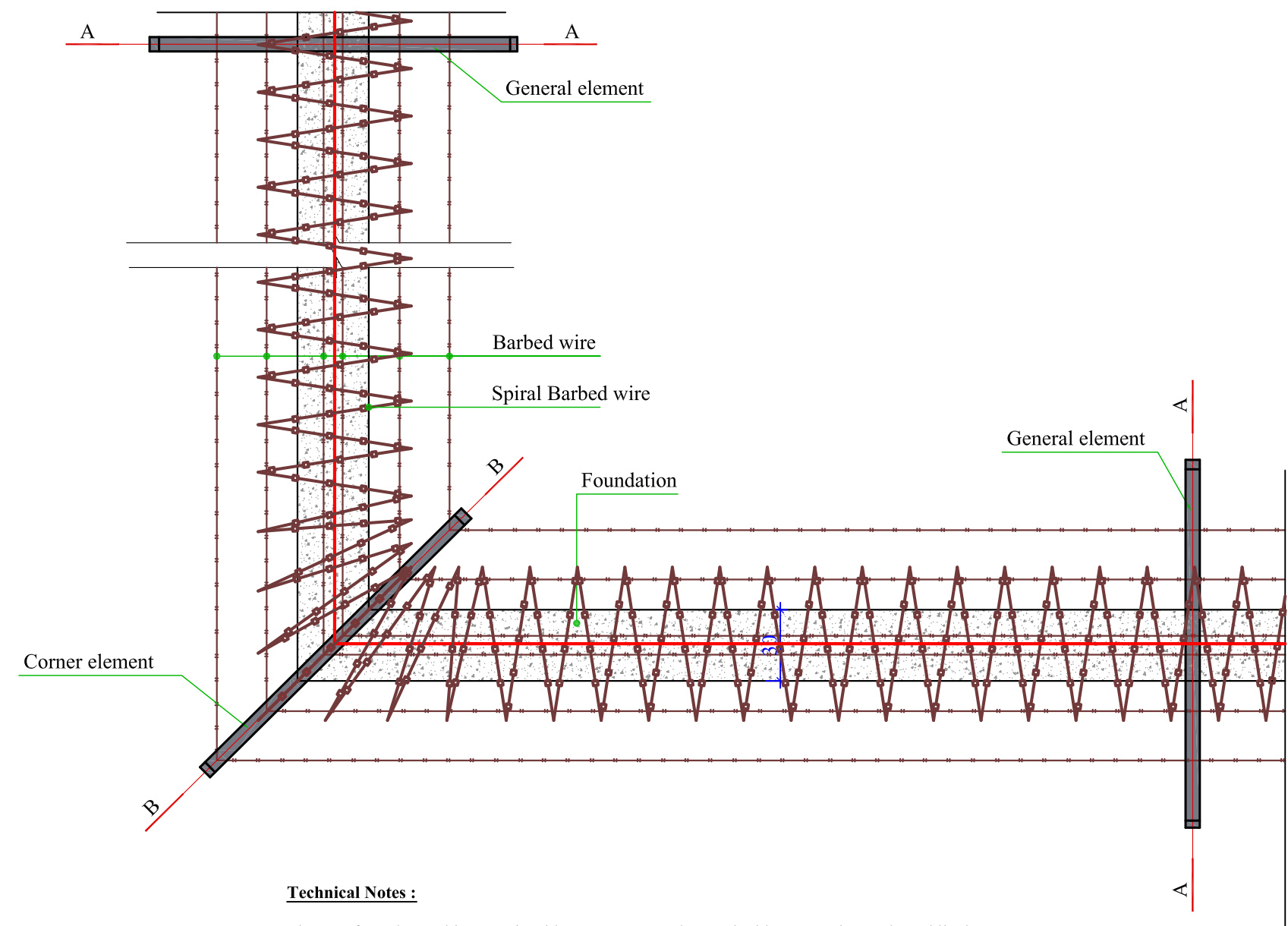


FENCING VIEW
Sc 1:25



PART OF FENCING PLAN

Sc 1:25



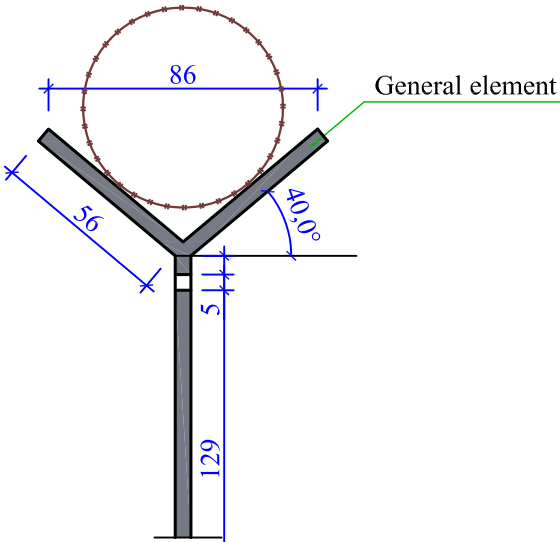
Technical Notes :

The new fence is provide to made with 50x50x4mm pipe steel with rectangular section while the upper part is provide to made in "V" shape, with Ø42.2mm ,t= 3.56mm steel pipe. Vertical pipes are inserted 35cm into deep concrete. The new complete enclosure fence has a 30cm above ground level, rhombic gabion wire mesh with 3mm diameter 50-60mm aperture and 200cm overall mesh height. The pipes are closed on top with thick steel plate 3mm welded to avoid corrosion inside the Pipe. At the whole height of the grid there are two Ø3mm welded wire which are fixed from column to column with welded hooks across the columns describing the grid and keeping it grid. strained after the columns. The grid is fixed behind the column with direct links to the levels provided in the project. On each side of " V " on the columns are placed 3 rows of barbed wire. It is envisaged that gabion mesh will be inserted 5cm into the concrete foundation. During the new enclosure fence, reinforcement elements are provided for every 3 camps but depending on the terrain this distance may vary. All steel elements will be painted with antirux and two coats of gray oil paint as gabion nets. At every 10m it is provided to insert into the foundation concrete a piece of plastic pipe Ø75 mm as the xokol width to allow the passage of natural water from one side to the other of the fence.

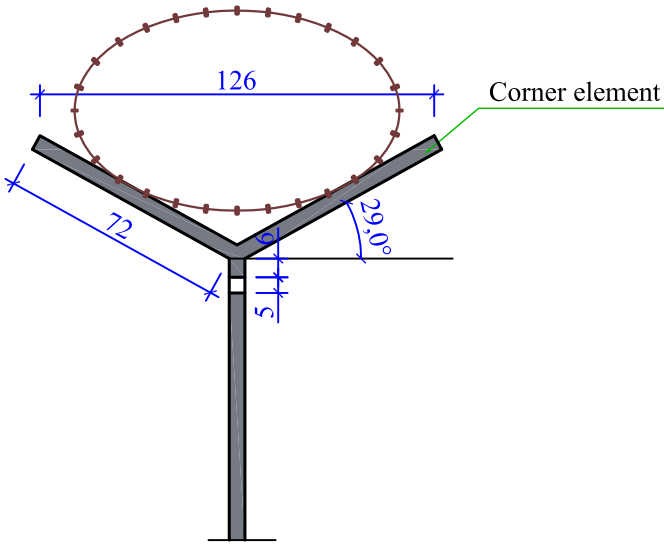
V.O

The objective of proposed project is to characterize the external fence in military units. In the BoQ is foreseen demolition of the old fence, cleaning of the bush, flattening with excavator as specified. The great length of the fence will require verification of the detail provided for the foundation of the fence depending on the terrain and therefore the designers should be notified before commencing work.

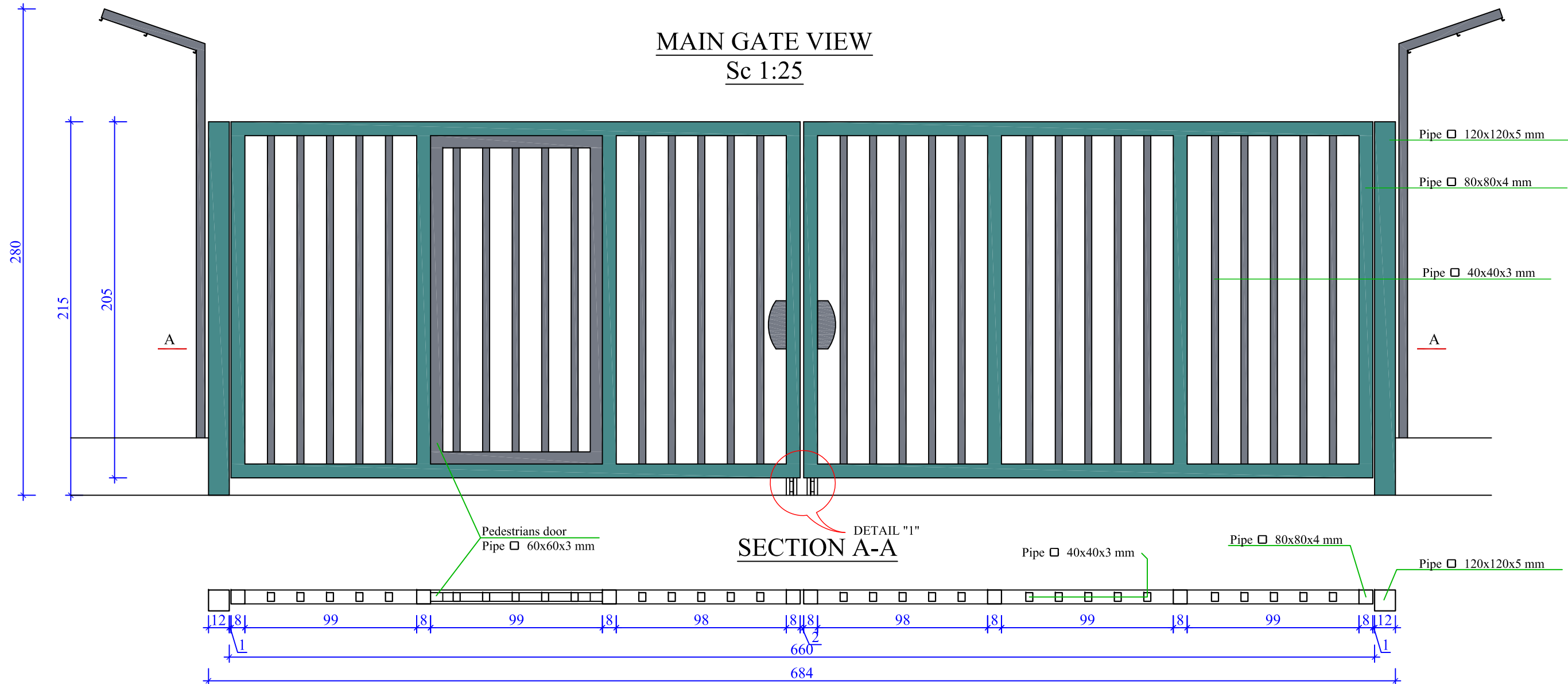
SECTION A-A



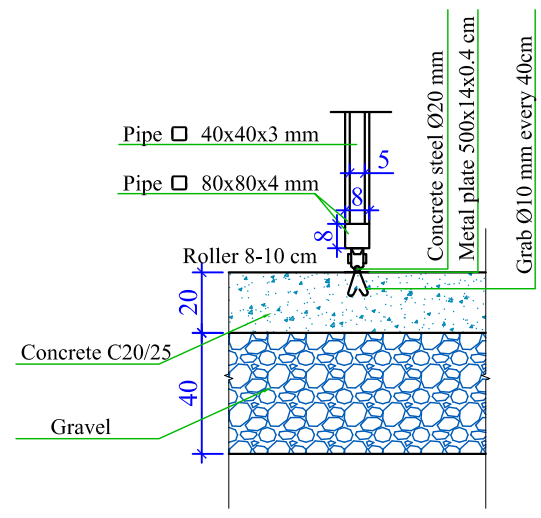
SECTION B-B



MAIN GATE VIEW
Sc 1:25



DETAIL "1"



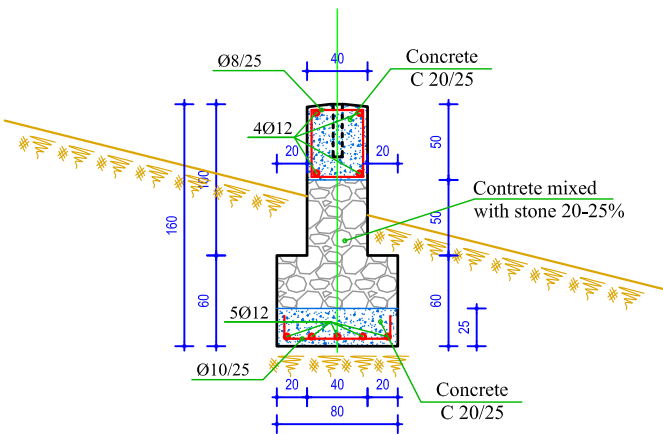
Technical note:

The metal construction of the door is cleaned with two hands of minimo and after we can apply two hands of zmalto paint. Profiles with 120x120mm section as well as 80x80mm section are provide to painted in dark green colors while others are gray in color like the Siege Pipe.

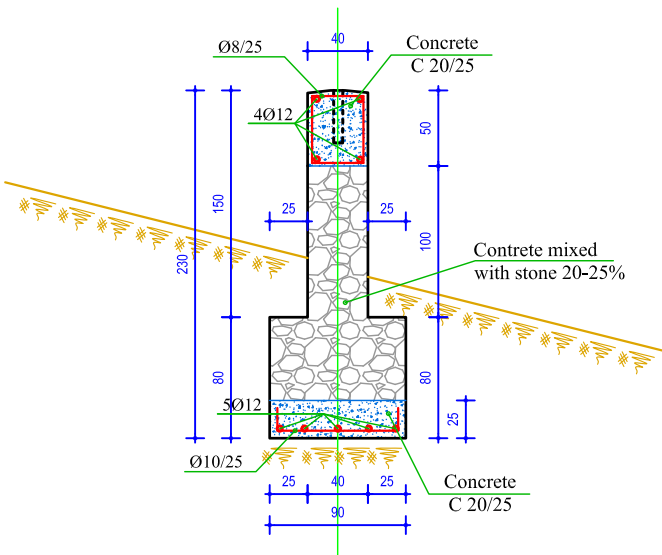
VOLUMES TABLE FOR THE MAIN GATE							
Foundations							
No.		ELEMENT	SURFACE	QUANTITY	LENGTH	VOLUME TOT	
			m ²	Piece	m	m ³	
1		Concrete C20 / 25 for gate column bases	0.25	2	0.6	0.30	
2		Concrete C20 / 25 for rail bases	0.10	1	7	0.70	
							1.00
Metal construction							
No.	METAL PROFILE	ELEMENT	LENGTH	QUANTITY	WEIGHT/UNITS	VOLUME TOT	
			m	Piece	kg/m	kg	
1		Rod d = 20mm for rail	5	2	2.48	24.80	
2		Spline 5000x140x4mm for the rail	5	2	5.50	54.95	
3		Profile 120x120mm, s=5mm	2.85	2	18.06	102.94	
4		Profile 80x80mm, s=4mm	28.4	1	9.55	271.22	
5		Profile 60x60mm, s=3mm	5.5	1	5.37	29.54	
6		Profile 40x40mm, s=3mm	57	1	3.49	198.93	
							682.38
7		Rollers,gloves,hinge, fixis grab	5%				34.12
	TOTAL QUANTITY					716.50	

WALLS SECTIONS

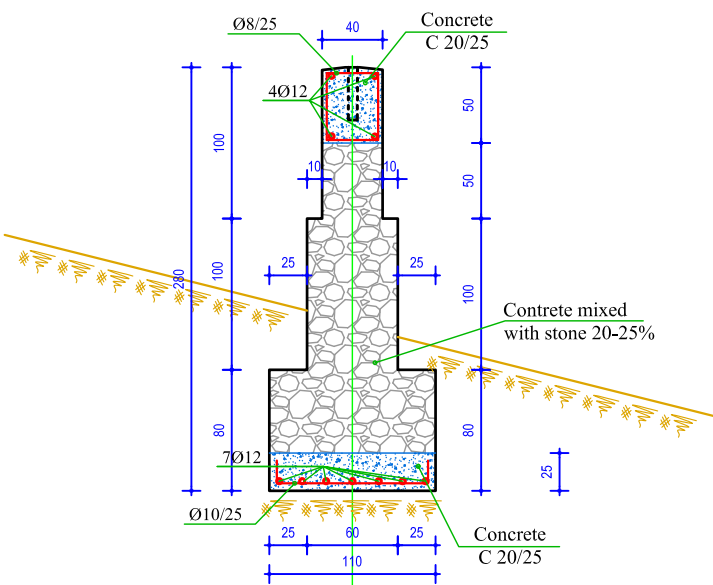
"M-1"



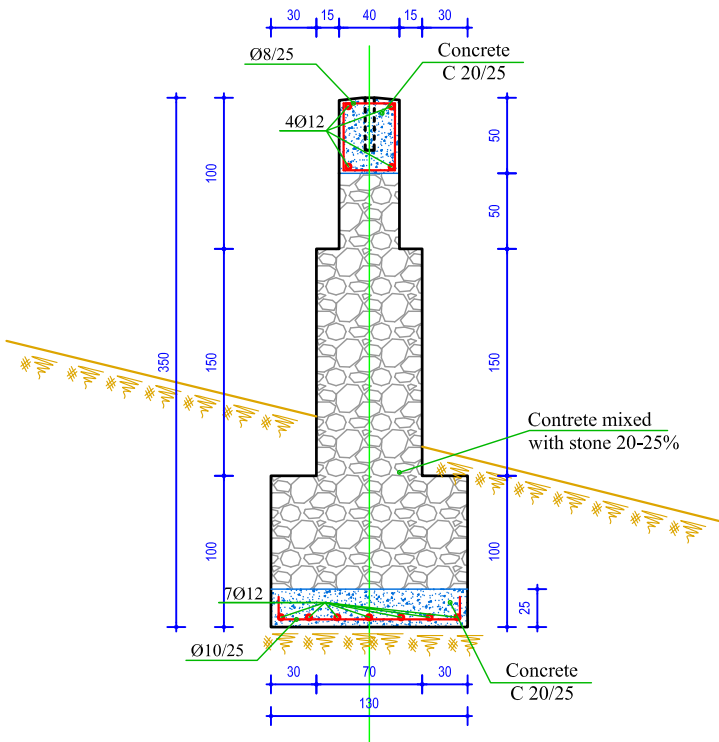
"M-2"



"M-3"



"M-4"



NOTICE:

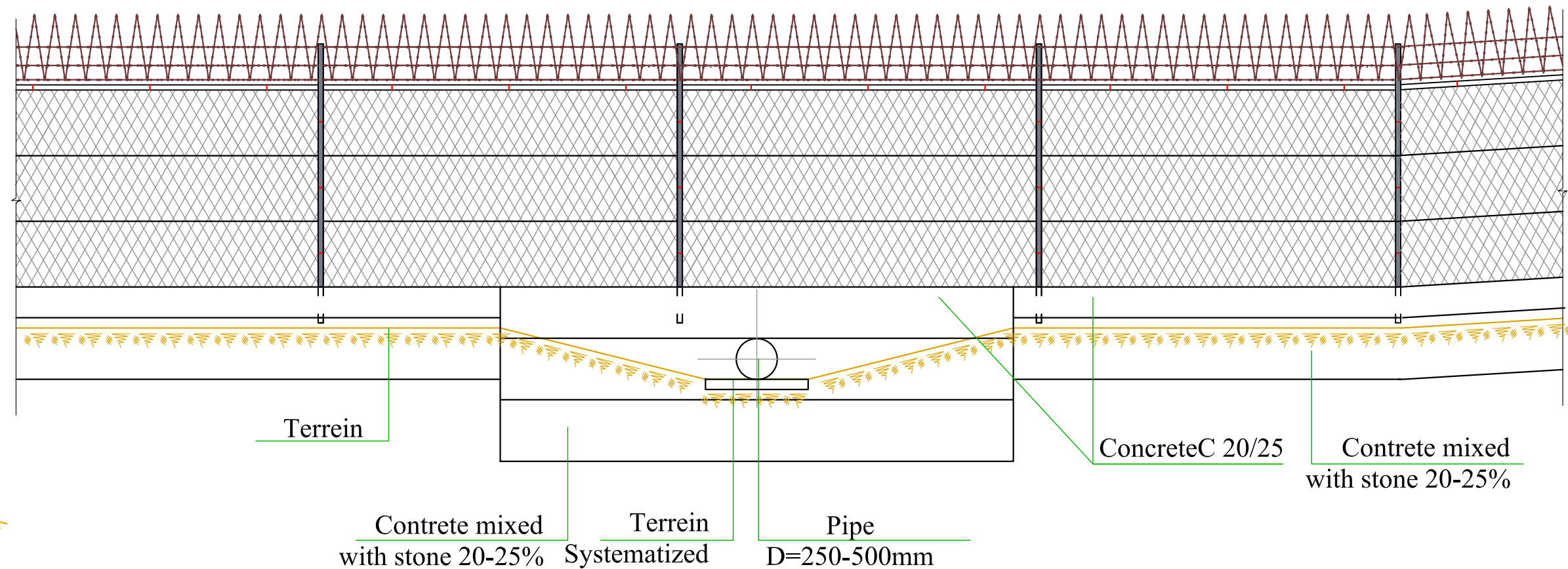
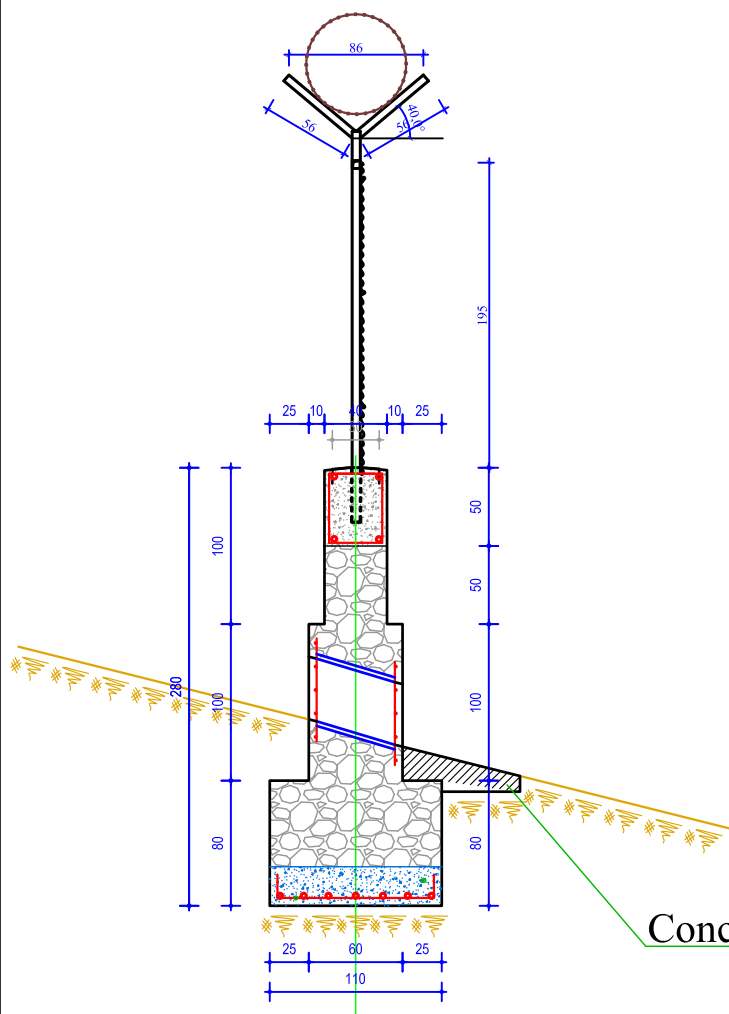
- The base of the foundation of the fencing walls will be made of concrete mixed with stone 20-25%
- In the final and the upper part, will be made concrete mixed belts, made of C20 / 25 concrete and S-500s iron, reinforced according to the relevant details;
- Surrounding walls should be divided by 3-5cm fuge every 10-12m length.

VOLUME TABLE UNITS/(ML)FOR TYPICAL WALLS					
Wall "M-1"					
No.	Wall M-1	ELEMENT	SURFACE	LENGTH	VOLUME TOT
			m ²	m	m ³
1		Concrete C20 / 25 for connecting belts	0.4	1	0.40
2		Contrete mixed with stone 20-25%	0.48	1	0.48
3		Concrete Iron d8-12mm, S-500s		13.7	kg
Wall "M-2"					
No.	Wall M-2	ELEMENT	SURFACE	LENGTH	VOLUME TOT
			m ²	m	m ³
1		Concrete C20 / 25 for connecting belts	0.43	1	0.43
2		Contrete mixed with stone 20-25%	0.90	1	0.90
3		Concrete Iron d8-12mm, S-500s		13.9	kg
Wall "M-3"					
No.	Wall M-3	ELEMENT	SURFACE	LENGTH	VOLUME TOT
			m ²	m	m ³
1		Concrete C20 / 25 for connecting belts	0.48	1	0.48
2		Contrete mixed with stone 20-25%	1.40	1	1.40
3		Concrete Iron d8-12mm, S-500s		16.2	kg
Wall "M-4"					
No.	Wall M-4	ELEMENT	SURFACE	LENGTH	VOLUME TOT
			m ²	m	m ³
1		Concrete C20 / 25 for connecting belts	0.53	1	0.53
2		Contrete mixed with stone 20-25%	2.23	1	2.23
3		Concrete Iron d8-12mm, S-500s		16.7	kg

CULVERT CONSTRUCTION DETAILS

FRONT VIEW

Cross Section



NOTE:

In the places of interruption of the fencing with water stream, will be placed culverts with Ribbed Pe Pipes Ø250-500mm, with length $L = 0.6\text{m}$. (See Plan and Longitudinal Profile).

At the entrances and exits of the culverts, where necessary, funnel-shape portals will be realized accordance with the terrain.

For safety reasons, will be placed on both sides of the pipeline, 10x10cm iron grill, made with Ø10mm rods.