

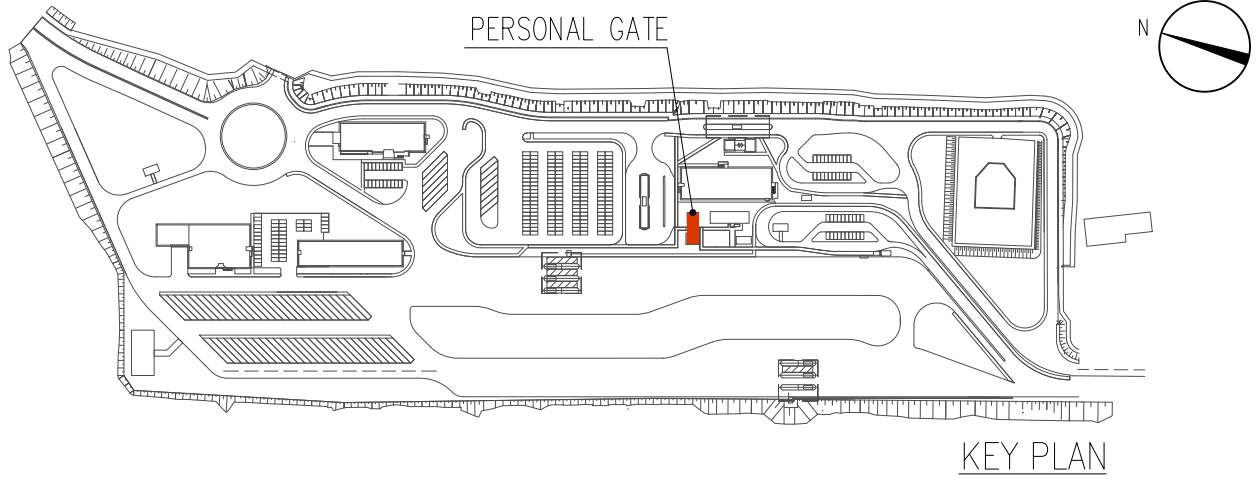
ENGINEERING PRACTICE TABLE

LOCATION	ITEMS	ARCHITECTURAL DETAILS	MATERIAL PROPERTIES
INTERNAL WALL	Pa1 INTERNAL WALL 1 PAINTED WALL APART FROM TOILET	WHITE INTERIOR WALL EMULSION PAINT (WATER-BASED), SPRAY APPLIED IN 2 COATS	1.THE PUTTY SHOULD HAVE NO CAKING, UNIFORM TEXTURE, AND A BONDING STRENGTH OF ≥
		PUTTY TO BE PLASTERED TWO COURSES	0.5MPA
		6MM THICK 1:2 CEMENT MORTAR WELL PLASTERED	2.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH ≥
		9MM THICK 1:3 CEMENT MORTAR	0.5MPA
		BASE WALL (TO BE PAINTED WITH SPECIAL INTERFACIAL AGENT ONE COURSE)	3.THE DRY DENSITY OF THE FOUNDATION WALL SHOULD BE ≥ 1.2T/M³, AND THE STRENGTH SHOULD BE ≥ 8.00M/M²
	Pa2 INTERNAL WALL 2 GLAZED TILE WALL TOILET 300X300(LENGTH AND WIDTH)	5MM THICK GLAZED TILE, WHITE CEMENT POINTING	1.GLAZED TILE HAS GOOD IMPACT RESISTANCE PROPERTY, CHEMICAL CORROSION
		4MM THICK 1: 1 CEMENT MORTAR WITH 20% WATER CONTENT GLUE BONDING LAYER	RESISTANCE RATING ≥ GRADE B, AND FRICTION COEFFICIENT ≥ 0.60.PLANARITY
		CEMENT PASTE ONE COURSE	+0.5%~-0.3%, WATER ABSORPTION <10%, BENDING STRENGTH >15Nmm²
		1.5MM THICK POLYMER WATERPROOF CEMENT COATING, IN FULL LENGTH	2.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH
		9MM THICK 1:3 CEMENT MORTAR WELL COMPACTED AND PLASTERED	SHOULD BE≥ 0.5MPA
		TO BE PAINTED WITH SPECIAL INTERFACIAL AGENT	3.POLYMER WATERPROOF CEMENT COATING HAS GOOD IMPERMEABILITY PROPERTY AND A
		BASE WALL, C20/25 CONCRETE WALL TO BE PROVIDED AT THE BOTTOM OF WALL (APART	BONDING STRENGTH GREATER THAN 1.0MPA.
		FROM DOOR OPENINGS). WALL HEIGHT IS 200MM, AND WIDTH SHALL BE THE SAME AS WALL	4.BONDING STRENGTH OF THE SPECIAL INTERFACE AGENT SHOULD BE ≥ 1.0MPA, AND HAS
		THICKNESS.	GOOD RESISTANCE TO WATER AND ALKALI EROSION.
			5.THE DRY DENSITY OF THE FOUNDATION WALL SHOULD BE ≥ 1.2T/M³, AND THE STRENGTH
			SHOULD BE ≥ 8.00M/M²
DROP-CEILING	Te1 CEILING 1 GYPSUM BOARD CEILING APART FROM TOILET AND SHADER THE CEILING HEIGHT IS 2.5 M	CEILING PAINTING TO BE APPLIED	1.THE PUTTY SHOULD HAVE NO CAKING, UNIFORM TEXTURE, AND A BONDING STRENGTH OF
		PUTTY TO BE PLASTERED ONE COURSE	≥ 0.5MPA
		12MM THICK ORNAMENTAL GYPSUM BOARD, WITH SELF-TAPPING SCREW, OPENING FILLED	2.PAPER FACED GYPSUM, WITH A SMOOTH AND FLAWLESS SURFACE.
		WITH PUTTY	3.LIGHT STEEL KEEL TENSILE STRENGTH SHOULD BE ≥ 300MPA.
		LIGHT STEEL KEEL (DOUBLE LAYER): INTERVALS BETWEEN MAIN KEELS EQUAL TO	
		900~1000MM, INTERVALS BETWEEN MINOR KEELS EQUAL TO 600MM, INTERVALS BETWEEN	
		TRANSVERSAL KEELS EQUAL TO 600MM	
		RESERVE AT THE BOTTOM OF THE BOARD R8 HANGING BARS,WITH A BIDIRECTIONAL MID	
		RANGE OF 900~1200	
	Te2 CEILING 2 PVC CEILING TOILET THE CEILING HEIGHT IS 2.5M	2.5MM THICK PVC BOARD FIXED WITH SELF TAPPING SCREWS	1.PVC BOARD DENSITY ≥ 1.3G/CM³, TENSILE STRENGTH ≥ 40MPA, BENDING STRENGTH ≥
		LIGHT STEEL KEEL (DOUBLE LAYER): INTERVALS BETWEEN MAIN KEELS EQUAL TO	60MPA.
		900~1000MM, INTERVALS BETWEEN MINOR KEELS EQUAL TO 600MM, INTERVALS BETWEEN	2.LIGHT STEEL KEEL TENSILE STRENGTH SHOULD BE ≥ 300MPA.
		TRANSVERSAL KEELS EQUAL TO 600MM	
		RESERVE AT THE BOTTOM OF THE BOARD R8HANGING BARS,WITH A BIDIRECTIONAL MID	
		RANGE OF 900~1200	
	Te3 CEILING 3 PAINTED CEILING BOTTOM OF SHADER	WHITE INTERIOR WALL EMULSION PAINT (WATER-BASED), SPRAY APPLIED IN 2 COATS	1.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH
		PUTTY TO BE PLASTERED TWO COURSES	SHOULD BE≥ 0.5MPA
		3MM THICK 1:2 CEMENT MORTAR WELL PLASTERED	
EXTERNAL WALL	Pa3 EXTERNAL WALL PAINTED WALL ALL EXTERNAL WALLS	5MM THICK 1:3 CEMENT MORTAR	
		CAST-IN-SITU RC FLOOR SLAB	
		TO BE PAINTED WITH SPECIAL INTERFACIAL AGENT	1.THE BONDING PERFORMANCE OF THE INTERFACE AGENT IS ≥ 1.0MPA, AND IT HAS GOOD
		15MM THICK 1:3 CEMENT MORTAR	RESISTANCE TO WATER AND ALKALI EROSION.
		100MM THICK ROCK WOOL BOARD INSULATION LAYER,ATTACHED WITH ADHESIVE	2.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH
		6MM ANTI-CRACK MORTAR, INSTALLED WITH ALKALI RESISTANT FIBERGLASS MESH FABRIC	SHOULD BE≥ 0.5MPA
		(FIXED BY ANCHOR BOLTS)	3.ROCK WOOL BOARD,THE HEAT TRANSFER COEFFICIENT U≤ 0.040W/(M · K). FIRE RATING
		RE-INSTALLATION OF ALKALI-RESISTANT FIBERGLASS MESH FABRIC..	LEVEL IS A.p≥110kg/m²
		SCRAPE FLEXIBLE AND WATER-RESISTANT PUTTY	4.THE TENSILE STRENGTH IN BOTH THE LATITUDINAL AND LONGITUDINAL DIRECTIONS OF
		PRIMER COAT ONE COURSE	ALKALI RESISTANT GLASS FIBER MESH FABRIC SHOULD BE ≥ 1500N/50MM. THE MESH
		FINAL COAT TWO COURSES	SHOULD HAVE GOOD ANTI-AGING PROPERTIES, THE BONDING STRENGTH SHOULD
			BASICALLY BE ≥ 0.5MPA.
			5.THE PUTTY SHOULD HAVE NO CAKING, UNIFORM TEXTURE, AND A BONDING STRENGTH OF ≥
			0.5MPA
			6.THE WALL CONSTRUCTION MEETS THE THERMAL TRANSMITTANCE U ≤ 0.45 W/(M · K).

LOCATION	ITEMS	ARCHITECTURAL DETAILS	MATERIAL PROPERTIES
GROUND	Pv1 GROUND 1 PORCELAIN TILE APART FROM TOILET 600X600(LENGTH AND WIDTH)	10MM THICK PORCELAIN TILE WELL LAID, THIN CEMENT PASTE PITCHING	1.PORCELAIN TILE ,BREAKING STRENGTH ≥35 MPA. DIMENSIONAL ERRORS SHOULD BE
		20MM THICK 1:3 CEMENT MORTAR	CONTROLLED WITHIN ±0.6%. THE TILE SURFACE SHOULD HAVE NO VISIBLE DEFECTS (SUCH AS
		150MM THICK C35/45 CONCRETE WITH T10-200 WIREMESH INSIDE	CRACKS, BUBBLES, COLOR DEVIATIONS, ETC.) PLANARITY +0.5%~-0.3%, WATER ABSORPTION
		FULLY-SPREAD ONE LAYER OF 0.4MM THICK POLYETHYLENE FILM	<10% , BENDING STRENGTH >15Nmm²
		100MM THICK C12/15 CONCRET, LEVELED AND SMOOTH-FINISHED WITH THE ORIGINAL	2.POLYETHYLENE FILM THICKNESS ERRORS SHOULD BE CONTROLLED WITHIN ±10%, WITH TEAR
		GROUT AFTER POURING, (SCREED LAYER)	STRENGTH >50 N/MM²
		GEOTEXTIL 150G/ M²	
	Pv2 GROUND 2 ANTI-SLIP CERAMIC TILE TOILET 600X600(LENGTH AND WIDTH)	150MM THICK CRUSHED STONES	
		PLAIN SOIL COMPACTION	
		10MM THICK CERAMIC TILE WELL LAID, THIN CEMENT PASTE PITCHING	1.CERAMIC TILE ,BREAKING STRENGTH ≥35 MPA. DIMENSIONAL ERRORS SHOULD BE
		30MM THICK 1:3 CEMENT MORTAR	CONTROLLED WITHIN ±0.6%. THE TILE SURFACE SHOULD HAVE NO VISIBLE DEFECTS (SUCH
		2MM THICK POLYMER WATERPROOF COATING, 300MM ABOVE FLOOR ON ALL SIDE	AS CRACKS, BUBBLES, COLOR DEVIATIONS, ETC.) PLANARITY +0.5%~-0.3%, WATER
		30MM THICK FINE AGGREGATE CONCRETE AT THE THINNEST PART, LEVELED AND	ABSORPTION <10% , BENDING STRENGTH >15Nmm²
		SMOOTH-FINISHED WITH THE ORIGINAL GROUT AFTER POURING	2.POLYMER WATERPROOF COATING SHOULD RESIST CORROSION FROM COMMON CHEMICALS
		CEMENT PASTE ONE COURSE	(SUCH AS ACIDS, ALKALIS, SALTS). BONDING STRENGTH ≥1.0 MPA.
		150MM THICK C35/45 CONCRETE WITH T10-200 WIREMESH INSIDE	3.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH
SKIRT	Rd1 SKIRT CERAMIC VENEER APART FROM TOILET 100mm (HEIGHT)	FULLY-SPREAD ONE LAYER OF 0.4MM THICK POLYETHYLENE FILM	SHOULD BE≥ 0.5MPA
		100MM THICK C12/15 CONCRET, LEVELED AND SMOOTH-FINISHED WITH THE ORIGINAL	4.POLYETHYLENE FILM THICKNESS ERRORS SHOULD BE CONTROLLED WITHIN ±10%, WITH
		GROUT AFTER POURING, (SCREED LAYER)	TEAR STRENGTH >50 N/MM²
		GEOTEXTIL 150G/ M²	
		150MM THICK CRUSHED STONES	
		PLAIN SOIL COMPACTION	
		10MM THICK CERAMIC VENEER	1.CEMENT MORTAR SHOULD HAVE GOOD COMPRESSIVE STRENGTH. BONDING STRENGTH
		4MM THICK 1: 1 CEMENT MORTAR WITH 20% WATER CONTENT GLUE BONDING LAYER	SHOULD BE≥ 0.5MPA
		PLAIN CEMENT MORTAR ONE COURSE	2.PORCELAIN TILE ,BREAKING STRENGTH ≥35 MPA. DIMENSIONAL ERRORS SHOULD BE
		6MM THICK 1: 2 CEMENT MORTAR	CONTROLLED WITHIN ±0.6%. THE TILE SURFACE SHOULD HAVE NO VISIBLE DEFECTS (SUCH AS
		9MM THICK 1: 3 CEMENT MORTAR	CRACKS, BUBBLES, COLOR DEVIATIONS, ETC.) PLANARITY +0.5%~-0.3%, WATER ABSORPTION
		BASE WALL (TO BE PAINTED WITH SPECIAL INTERFACIAL AGENT ONE COURSE)	<10% , BENDING STRENGTH >15Nmm²
			3.THE DRY DENSITY OF THE FOUNDATION WALL SHOULD BE ≥ 1.2T/M³, AND THE STRENGTH
			SHOULD BE ≥ 8.00M/M²
ROOF	Pv6 CEMENT MORTAR ROOF	30MM C20/25 FINE AGGREGATE CONCRETE WITH R8-250 WIREMESH INSIDE	1.SELF-ADHESIVE MODIFIED BITUMEN SHEET SHOULD BE 3 KG/M2 TO 5 KG/M². TENSILE
		4MM THICK MODIFIED ASPHALT II TYPE WATERPROOF ROLLS	STRENGTH >500 N/50 MM. TEAR STRENGTH ≥200 N.
		20MM THICK 1: 2.5 CEMENT MORTAR LEVELING	2.ROCK WOOL BOARD,THE HEAT TRANSFER COEFFICIENT U≤ 0.040W/(M · K). FIRE RATING
		LIGHT-WEIGHT CONCRETE SLOPING COURSE, AND THE THINNEST PART IS 30MM (WITH	LEVEL IS A.p≥110kg/m²
		INCLINATION OF 2%)	3.POLYETHYLENE FILM THICKNESS ERRORS SHOULD BE CONTROLLED WITHIN ±10%, WITH
		100MM THICK ROCK WOOL BOARD INSULATION LAYER	TEAR STRENGTH >50 N/MM.
		FULLY-SPREAD ONE LAYER OF 0.4MM THICK POLYETHYLENE FILM	4.THE ROOF CONSTRUCTION MEETS THE THERMAL TRANSMITTANCE U ≤ 0.45 W/(M · K).
	Pv7 CEMENT MORTAR ROOF SHADER	CAST-IN-SITU RC FLOOR SLAB	
		30MM C20/25 FINE AGGREGATE CONCRETE WITH R8-250 WIREMESH INSIDE	1.SELF-ADHESIVE MODIFIED BITUMEN SHEET SHOULD BE 3 KG/M² TO 5 KG/M². TENSILE
		4MM THICK MODIFIED ASPHALT II TYPE WATERPROOF ROLLS	STRENGTH >500 N/50 MM. TEAR STRENGTH ≥200 N.
		20MM THICK 1: 2.5 CEMENT MORTAR LEVELING	2.ROCK WOOL BOARD,THE HEAT TRANSFER COEFFICIENT U≤ 0.040W/(M · K). FIRE RATING
		LIGHT-WEIGHT CONCRETE SLOPING COURSE, AND THE THINNEST PART IS 30MM (WITH	LEVEL IS A.p≥110kg/m²
		INCLINATION OF 2%)	
		CAST-IN-SITU RC FLOOR SLAB	

FACILITIES TABLE

FACILITIES	Eq1	WASHBASIN WATER COPPER MATERIAL FAUCET	WASHBASIN WATER COPPER MATERIAL FAUCET.
	Eq2	SHOWER COPPER MATERIAL SHOWER HEAD	SHOWER COPPER FAUCET WITH CHROME FINISH
	Eq3	CERAMIC WASHBASIN WHITE GLAZED COUNTER BASIN	WHITE GLAZED COUNTER BASIN
	Eq4	CERAMIC CLOSE STOOL WHITE GLAZED TOILET	WHITE GLAZED TOILET
	Eq7	MIRROR GLASS	MIRROR GLASS, DIMENSIONS REFER TO DRAWING. MIRRORS SHALL BE MANUFACTURED FROM GLASS MINIMUM 6MM THICK AND SHALL HAVE GROUND AND POLISHED EDGES, PROTECTIVE PAINT COATING SHALL PROTECT THE SILVERING. SILVERING SHALL BE OF A MINIMUM THICKNESS OF 65 TO 75 MG/SQ. FT WITH A GUARANTEE OF 10 YEARS.
	Eq8	MARBLE COUNTERTOP	MARBLE COUNTERTOP, DIMENSIONS REFER TO DRAWING.
	Eq13	TISSUE BOX	PLASTIC
	Eq14	TOWEL HOOK	PLASTIC
	Eq15	CERAMIC MOP BASIN	WHITE GLAZED
	Eq19	KITCHEN COUNTERTOP	THE LOWER CABINET COUNTERTOP SHALL BE MADE OF ARTIFICIAL STONE, WITH COMPRESSIVE STRENGTH OF ≥120 MPA, MOHS HARDNESS OF ≥5, WATER ABSORPTION RATE OF ≤0.1%, AND CE CERTIFIED.





NOTES:

1. THE PERSONAL GATE FREEZONE'S ABSOLUTE ELEVATION OF ± 0 IS 7.90M.
2. ACCORDING "GEOTECHNICAL INVESTIGATION REPORT FOR MAIN GATE AND FREE ZONE AREA WORKS OF THE CAIO NEW PORT PROJECT IN ANGOLA" APPENDIX : B-2. THE HIGHEST ASTRONOMICAL TIDE LEVEL IS 4.60M, THE LOWEST POINT ELEVATION OF PERSONAL GATE FREEZONE IS 7.60M, INDOOR AND OUTDOOR HEIGHT DIFFERENCE SHALL BE 0.3M, AND THE THICKNESS OF THE GROUND CONSTRUCTION METHOD IS 500MM, WITH A DIFFERENCE OF 2.80M BETWEEN THE TWO. THE GROUND CUSHION LAYER IS MUCH HIGHER THAN THE GROUNDWATER LEVEL LINE .
- 3.ALL BUILDING COMPONENTS EXPOSED TO OUTDOOR ENVIRONMENT SHOULD BE PROVIDED WITH ANTI-CORROSION MEASURES OF C5 RATING. ALL INDOOR BUILDING COMPONENTS SHOULD BE PROVIDED WITH ANTI-CORROSION MEASURES OF C1 RATING.
- 4.ALL GALVANIZING WORKS WHERE SPECIFIED SHALL BE HOT-DIP GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF EN ISO 1461:2009. THE MINIMUM COATING THICKNESS IS 85μm(STEEL 5MM THICK AND OVER). THE MINIMUM COATING THICKNESS IS 64μm (STEEL UNDER 5MM THICK BUT NOT LESS THAN 2MM).
- 5.THE DETAILED ROOFING SYSTEM (SOLAR PANELS SUPPORTS INCLUDED) WILL BE PREPARED AND DETAILED BY THE SUPPLIER,AND ITS METAL COMPONENTS SHOULD MEET THE C5 CORROSION RESISTANCE REQUIREMENTS, FASTENERS SHOULD BE EFFECTIVELY SECURED AND FIRMLY FIXED. THE WATERPROOF LEVEL AND PERFORMANCE OF SEALING COMPONENTS OF SOLAR SUPPORTS SHOULD BE CONSISTENT WITH THAT OF THE ROOF, AND THE ORIGINAL WATERPROOF SYSTEM SHOULD NOT BE DAMAGED.
- 6.THE RAINWATER PIPE IS MADE OF GALVANIZED STEEL, THE DRAWINGS WILL BE PREPARED AND DETAILED BY THE SUPPLIER. THE ANTI-CORROSION PERFORMANCE SHOULD BE C5 GRADE. THE RAINWATER PIPE CLAMP IS MADE OF METAL AND CAN FIRMLY FIX THE RISER WITH A SPACING OF LESS THAN 1,500MM.
7. THE SANITARY WARES AND EQUIPMENT IN THE KITCHEN AND BATHROOM SHALL BE DETERMINED BY THE MANUFACTURER IN THE FORM OF SHOP DRAWINGS, INCLUDING THE CHARACTERISTICS OF THE MATERIALS IN TERMS OF DURABILITY, IMPACT RESISTANCE, WATER RESISTANCE, CHEMICAL RESISTANCE AND FIRE RESISTANCE.

Engineer Approval Codes			
Code Nr	Condition	Signature Employer's Representative	Date
Code 1	Noted Work may proceed.		
Code 2	Noted with comments Work may proceed.		
Code 3	Rejected Work may not proceed. Revise and resubmit.		

01	Revised according to RAD-RBC-135(ARCH Part)	23/03/2025	✓ - H
00	First Submittals	20/12/2024	✓ - H
REVISION	DESCRIPTION	DATE	CHECKED

EMPLOYER	 PORTO DE CAIO CABINDA Caioporto S.A. Avenida Comandante Gika n °150 CP 1276 Sagrada Familia Luanda, Angola
EMPLOYER'S REPRESENTATIVE/ENGINEER	Sellhorn Ingenieurgesellschaft mbH Teifels 5, D-20459 Hamburg, Germany Tel: +49 (40) 36 12 01-0 Fax: +49 (40) 36 12 01-28 E-Mail: info@sellhorn-hamburg.de www.sellhorn-hamburg.de
CONSULTANT	Sellhorn Ingenieurgesellschaft mbH Teifels 5, D-20459 Hamburg, Germany Tel: +49 (40) 36 12 01-0 Fax: +49 (40) 36 12 01-28 E-Mail: info@sellhorn-hamburg.de www.sellhorn-hamburg.de
CONTRACTOR	 CRBC China Road and Bridge Corporation R. Femeu Mendez Pinto 55 Avenida Lumbis, Angola Fax: +244 22 232 7003 http://www.crbc.com/

The Project of the New Port of Caio in Cabinda

DRAWING TITLE

Onshore Buildings_Personal Gate Freezone
Engineering Practice Table

	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DRAWING N°
DATE	20/03/2025	22/03/2025	23/03/2025		
NAME	新	新	✓ - H	NTS	LOT1_DD_1022-A-01
DESIGN STAGE	DETAILED DESIGN				