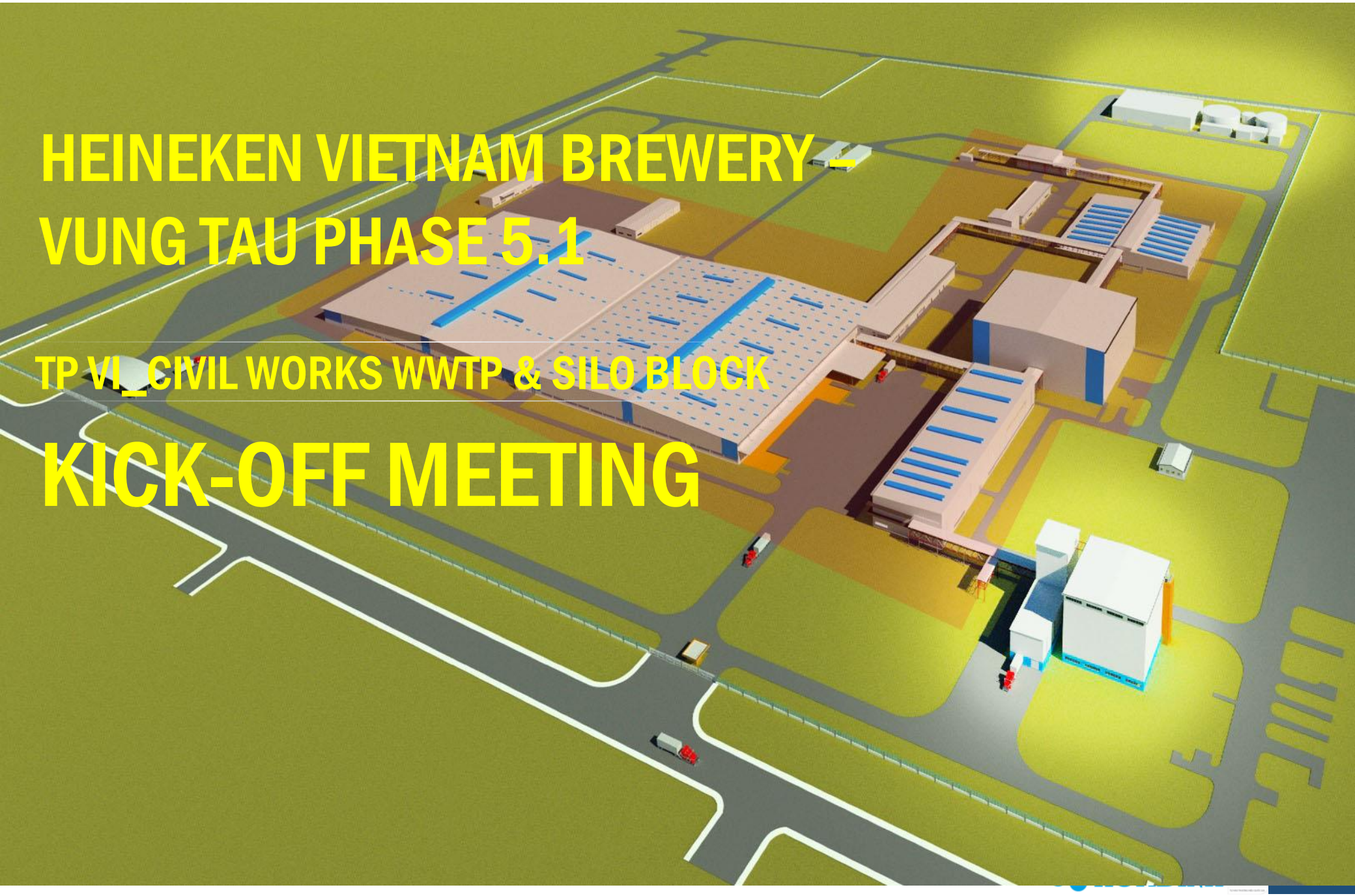
HEINEKEN VIETNAM BREWERY – VUNG TAU PHASE 5.1

TP VI_CIVIL WORKS WWTP & SILO BLOCK

KICK-OFF MEETING



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02. Commercial

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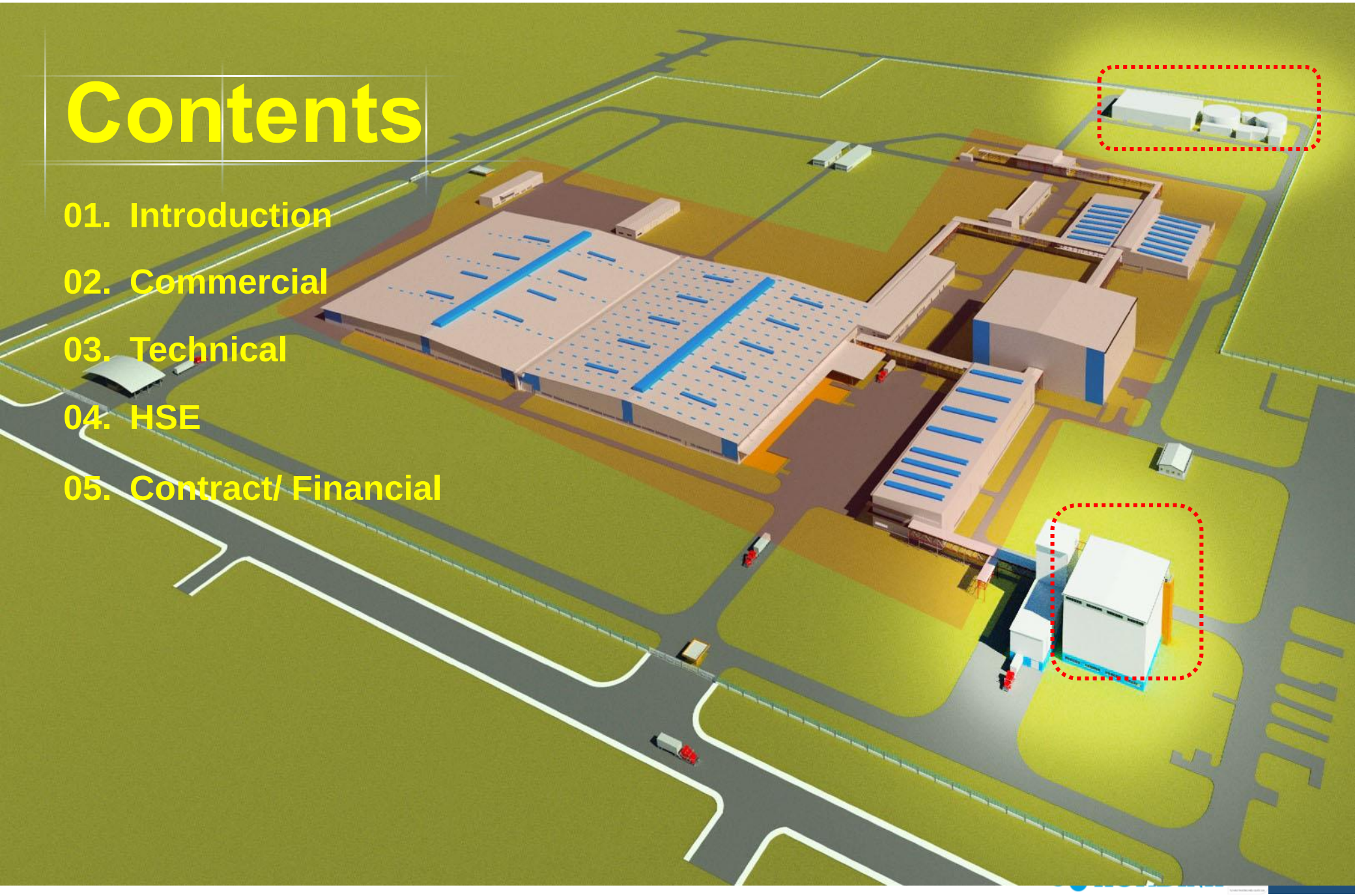
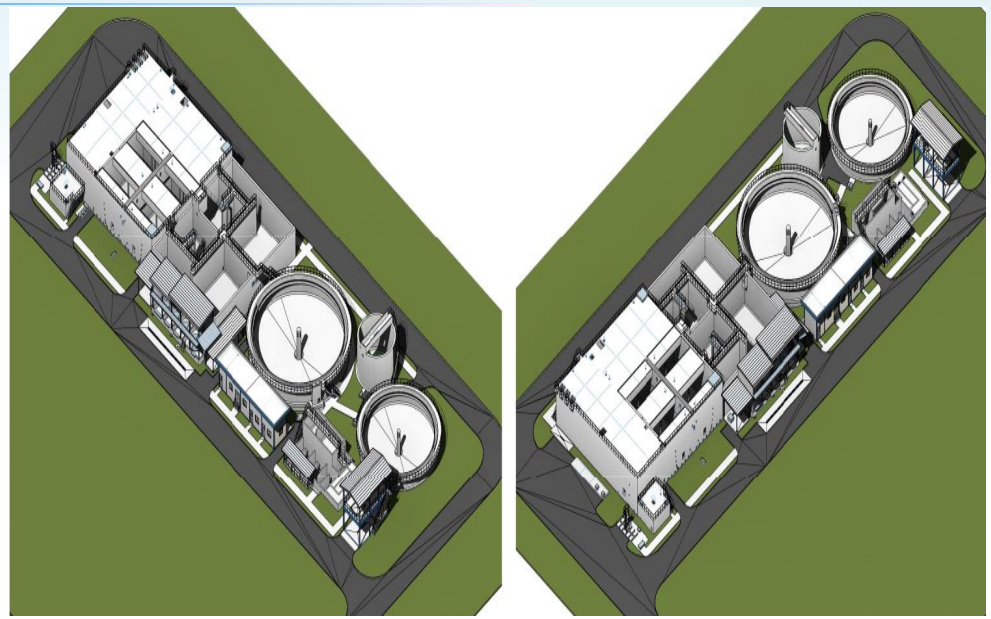
04. HSE

05. Contract/ Financial



Project Overview

Map of Site Location



HEINEKEN VIETNAM BREWERY – VUNG TAU PHASE 5.1

PACKAGE: TP VI_CIVIL WORKS WWTP & SILO BLOCK

Consulting Engineer: HaskoningDHV Vietnam Co., Ltd.

Location: My Xuan A Industrial Zone, Tan Thanh District, Ba Ria-Vung Tau Province, Vietnam

Stakeholders

1.External

CLIENT/ EMPLOYER: **HEINEKEN VIETNAM BREWERY**

HEINEKEN
HEINEKEN VIETNAM BREWERY

DESIGN, PROJECT MANAGEMENT & COST MANAGEMENT: **ROYAL HASKONINGDHV**

Royal HaskoningDHV
Enhancing Society Together

Stakeholders

1. External

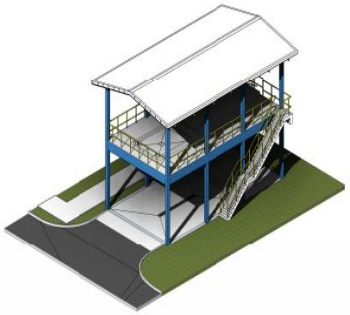
	VENDOR LIST		
Client/ Employer	*Global Purchasing Manager*	Tjeerd Meij	Tjeerd.Meij@heineken.com
	Vietnam Purchasing Manager	Ngo Duc Hanh	NgoDuc.Hanh@heineken.com
	Civil Engineer	Hoa Quang Nam	HoaQuang.Nam@heineken.com
	Civil Representative	Sorayuth Chompaisairn	vblcivil.consultant@heineken.com
Project Management & Cost Management	*Project Manager*	Joost Jan Oosterhuis	joost.jan.oosterhuis@rhdhv.com
	Procurement Team	Xuyen Doan	xuyen.doan@rhdhv.com

Stakeholders

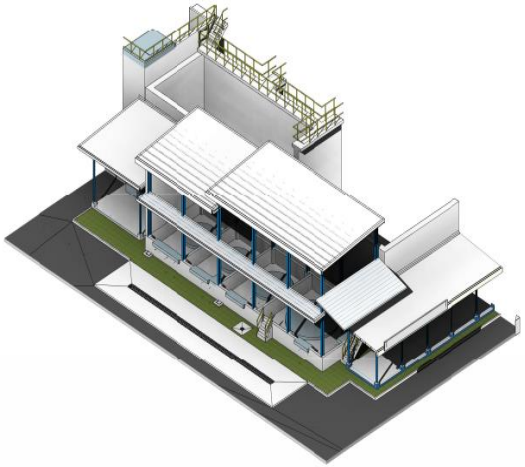
1. Internal

NỘI BỘ HOÀ BÌNH				
Phòng Dự Thầu	Trưởng phòng	Nguyễn Đình Khôi	0917 786 768	khoi.nguyendinh@hbcr.vn
	Trưởng nhóm dự thầu	Võ Hoàng Sơn	0911 804 497	son.vo@hbcr.vn
	Phụ trách MEP	Trần Duy Anh	0938 108 098	anh.tran@hbcr.vn
	Phụ trách CPC	Trần Minh Hải	0909 848 344	haib.tran@hbcr.vn
Phòng Kỹ Thuật	Trưởng nhóm kỹ thuật	Huỳnh Ngọc Sanh	0917 408 530	sanh.huynh@hbcr.vn
Phòng Hợp Đồng	Trưởng nhóm hợp đồng	Nguyễn Thị Vân Anh	0911 877 915	anh.nguyenthivan@hbcr.vn
Phòng QS	Phụ trách dự án	tba	tba	tba
Phòng Vật Tư	Phụ trách dự án	tba	tba	tba
QA/QC	Phụ trách dự án	tba	tba	tba
MATEC	Phụ trách dự án	tba	tba	tba
Ban An Ninh	Phụ trách dự án	tba	tba	tba
Ban Trắc Đạc	Phụ trách dự án	tba	tba	tba
Phòng Tài Chính	Phụ trách dự án	tba	tba	tba
Ban Ngân Sách	Phụ trách dự án	tba	tba	tba

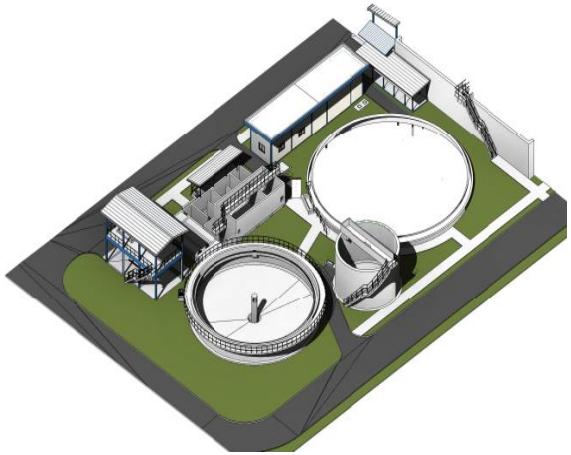
Scope of Work



Phối Cảnh Nhà Khử Nước Bùn/ Sludge Dewatering Building 3D View



Phối Cảnh Nhà Hóa Chất/ Chemical Building 3D View

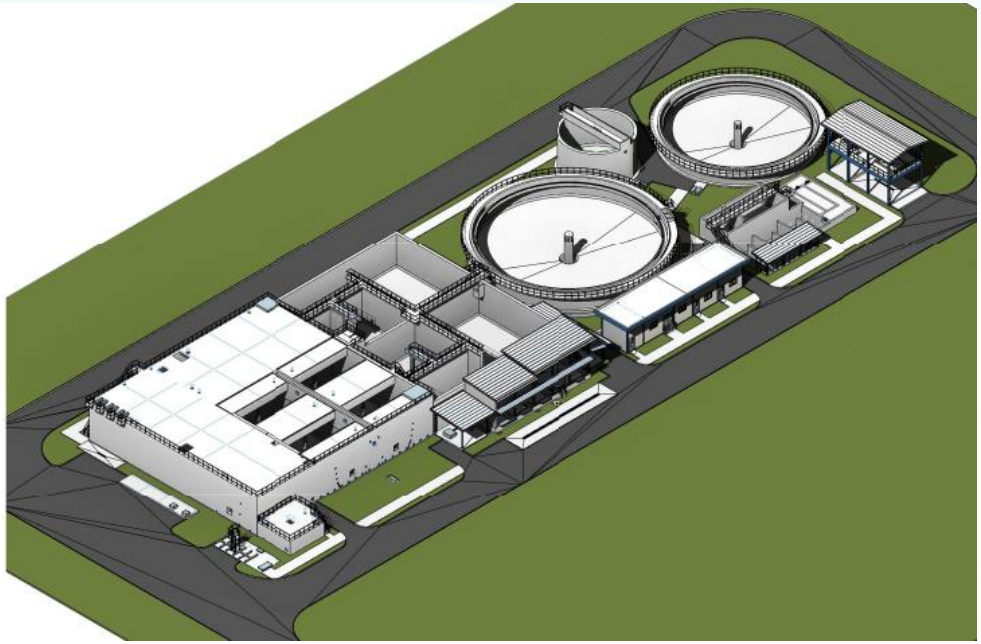


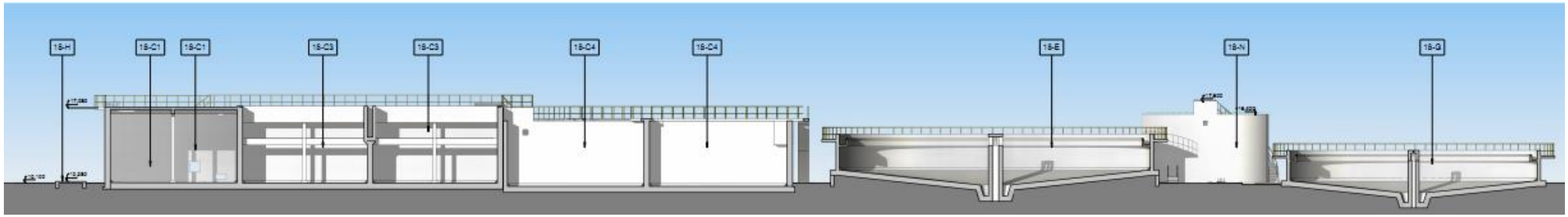
DETAILS SCOPE OF WORK

No	Item Description	Scope of works	Remarks
I	**01.SILO BLOCK**		
1	01. Silo Block	Earth works, Concrete works, Masonry work, Finishing and Other works	
II	**18.WASTE WATER TREATMENT PLANT**		
1	18B. Influent Pump Pit	Earth works, Concrete works and Other works	
2	18C. Equalization Tank,Anaerobic Sludge Storage	Earth works, Concrete works and Other works	
3	18D. Mixing Basin	Earth works, Concrete works and Other works	
4	18E. Secondary Clarifier	Earth works, Concrete works and Other works	
5	18F. Sludge Dewatering Building	Earth works, Concrete works, Metal works and Other works	
6	18G. Tertiary Clarifier	Earth works, Concrete works, Metal works and Other works	
7	18H. Biofilter	Earth works, Concrete works, Metal works and Other works	
8	18J. Gasodrix Shed	Earth works, Concrete works, Metal works and Other works	
9	18K. Blower Shed	Earth works, Concrete works, Metal works and Other works	
10	18L. Influent Heat Exchanger + Cooling Towers Plinth	Earth works, Concrete works and Other works	
11	18M. Control building	Earth works, Concrete works, Masonry works, Finishing, Door and Windows, Sanitary ware and Other works	
12	18N. Gravity Thickener	Earth works, Concrete works and Other works	
13	18P. Rapid Floculation Neutralization Disinfection Disc Filter Channel	Earth works, Concrete works, Metal works and Other works	
14	18Q. Chemical Building	Earth works, Concrete works, Metal works and Other works	
III	**UNDER GROUND PIPING FOR WWTP & EARTHING SYSTEM**	Equipments; RC. Drain pit with cover, uPVC pipe (PN9) :	
IV	**EXTERNAL WORKS AROUND WWTP**	Grasscrete access road, load-bearing permeable system paving; Walkway - grasscrete; Grass turf area	

Scope of Work

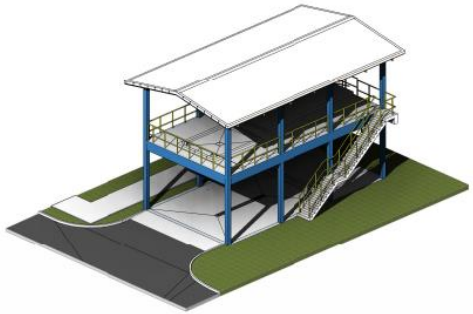
DETAILS SCOPE OF WORK



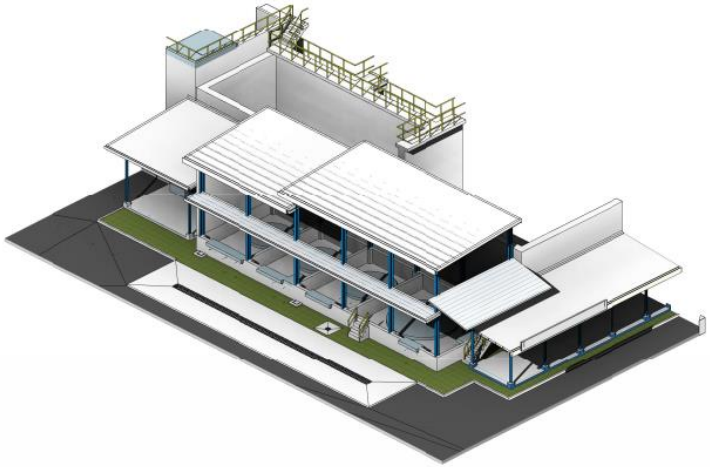


Scope of Work

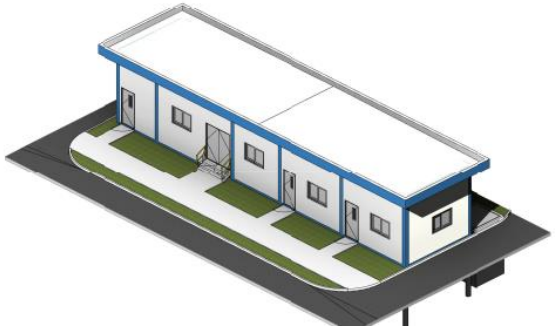
DETAILS SCOPE OF WORK



Phối Cảnh Nhà Khử Nước Bùn/ Sludge Dewatering Building 3D View



Phối Cảnh Nhà Hóa Chất/ Chemical Building 3D View



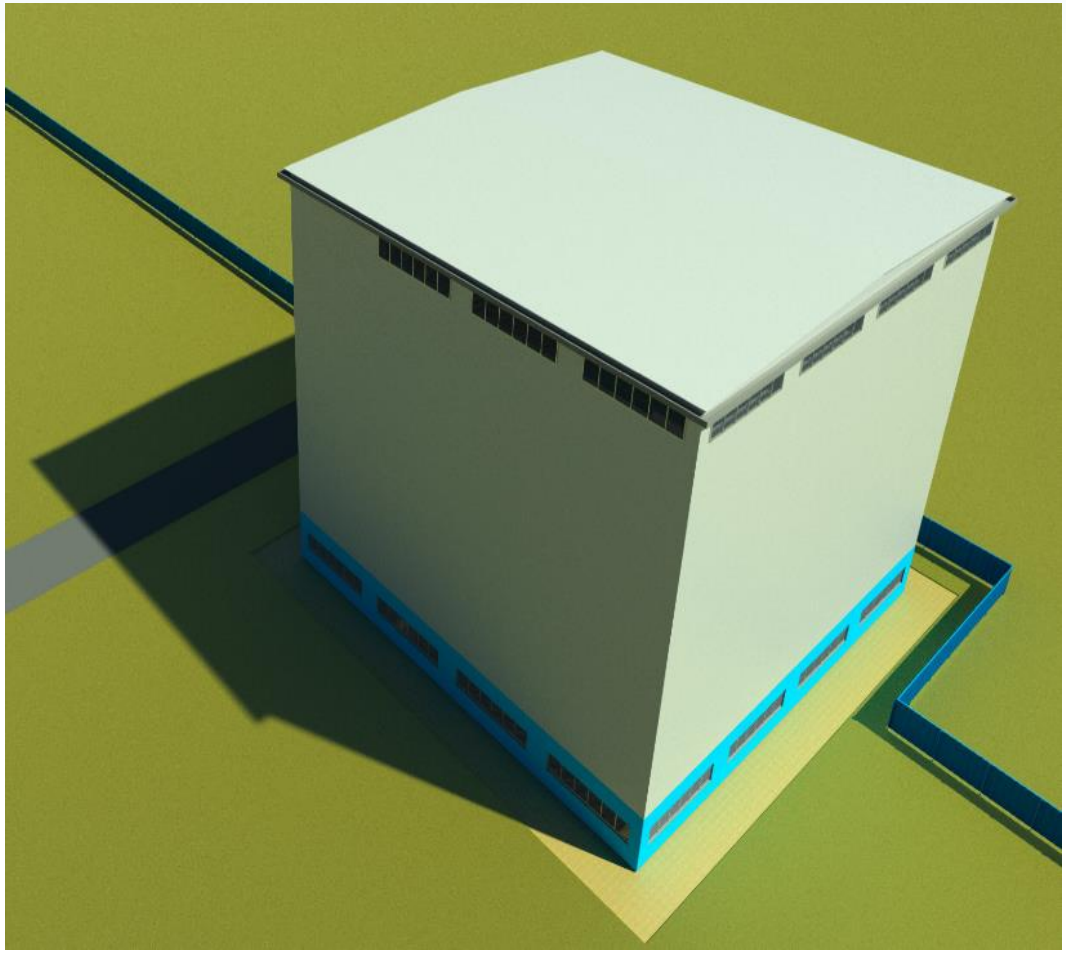
Scope of Work

DETAILS SCOPE OF WORK

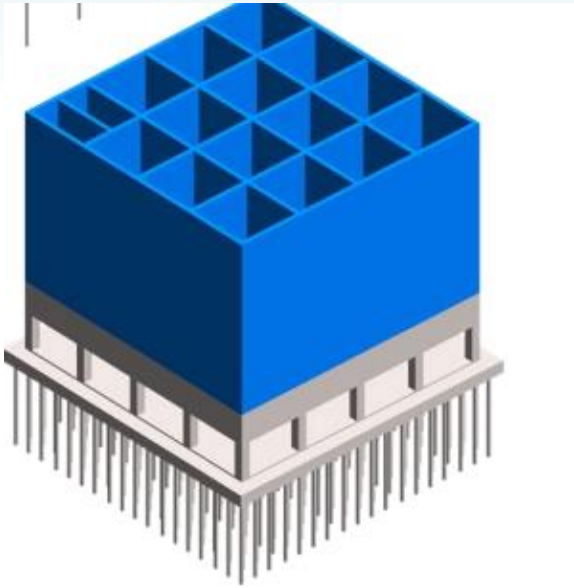
18-WWTP-Building Items	
Number	Item
18-B	INLUENT PUMP PIT / Bể Bơm Nước Thải
18-C1	EQUALIZATION TANK / Bể Cân Bằng
18-C2	ANAEROBIC SLUDGE STORAGE BASIN / Bồn Chứa Bùn Kỵ Khí
18-C3	METHANE REACTORS/ Bồn Phản Ứng Khí Methane
18-C4	AERATIONS & DENITRIFICATIONS TANK / Bể Khử Khí Và Khử Nitrat
18-C5	CALAMITY TANK / Bồn Chứa Khẩn Cấp
18-D	MIXING BASIN / Bể Trộn
18-E	SECONDARY CLARIFIER / Bể Lắng Thứ Cấp
18-F	SLUDGE DEWATERING BUILDING / Nhà Khử Nước Bùn
18-G	TERTIARY CLARIFIER / Bể Lắng Bậc Cao
18-H	BIOFILTER / Lọc Sinh Học
18-J	GASODRIX SHED / Khu Vực Nén Khí Gas
18-K	BLOWER SHED / Nhà Che Quạt
18-L	INFLUENT HEAT EXCHANGER + COOLING TOWERS PLINTH / Thiết Bị Trao Đổi Nhiệt Phụ + Bệ Đỡ Của Tháp Giải Nhiệt
18-M	CONTROL BUILDING / Nhà Điều Khiển
18-N	GRAVITY THICKENER / Thiết Bị Cô Đặc Kiểu Trọng Trường
18-P	RAPID FLOCCULATION NEUTRALIZATION DISINFECTION DISC FILTER CHANNEL / Kênh Lọc Dạng Đĩa Khử Trùng Trung Hòa Kết Tụ Nhanh/
18-Q	CHEMICAL BUILDING / Nhà Hóa Chất

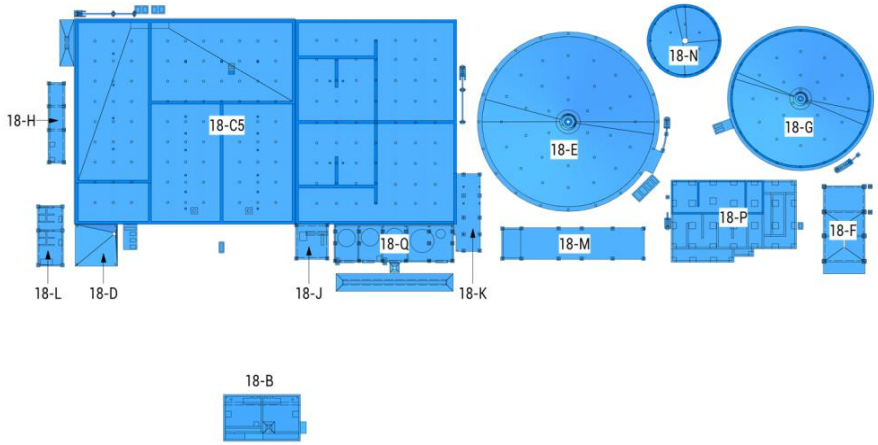
Scope of Work

DETAILS SCOPE OF WORK



Scope of Work





LIST OF OTHER CONTRACTORS TO BE CO-ORDINATED WITH

Cooperation with other contractos	Name of sub-con and suppliers
TP IV – PESB Foundations contractor	Other
TP II – PESB Steel Buildings contractor	ATAD
Equipment Suppliers	
➔ Kuenzel	(Malt Storage Building)
➔ Krones	(Brew House and Packaging Building)
➔ GEA	(Service Block and Tank-in-Box)
➔ Holvrieka	(Tank-in-Box)
➔ JCI, Haffmans, Chriwa, Kinh Luan, Atlas Copco	(Utility Building)
➔ GWE	(Waste Water Treatment Plant)
➔ ABB/Phu Thai CAT	(Power House and various transformer/panel rooms)

COMMERCIAL SUMMARY

Content

2.1. Preliminary

2.2. CSA

2.3. MEP

2.4. Material List

2.5. Sub-contractor List

Seller & Buyer Obligation List

v.4	2/27/2017	BUYER & SELLER OBLIGATION LIST									
	Buyer	Heineken Vietnam Brewery - Vung Tau JSC.	This document determines responsibilities regarding selected items/facilities which Buyer and/or Seller shall arrange and/or pay. Items selected as not applicable are irrelevant to the agreement between Buyer and Selller unless it can be clearly shown that such an omission was made by error.								
	Seller										
	Project	Heineken Vietnam Brewery - Vung Tau, Phase 5.1									
	Project No	VN1266									
						Arranged			Paid		
	INCO term:	DAP	Incoterms 2010 Apply								
	Containers:	Liner owned OR Second hand certified shippers owned containers which will/will not become property of the Buyer on moment of arriving at Buyers site	Numbe rof containers	Applicable		Seller	Buyer		Seller	Buyer	
#	Item/facility		Comment on item/facility								Confirmed (agreed / understood) by
A	PERMISSION BY AUTHORITIES										
A.1	Environmental impact assessment			y			x			x	Confirmed
A.2	Permission to build / construct the plant			y			x			x	Confirmed
A.3	Permission to import and install the equipment			n							Open
A.4	Permission to import and export the (consumption-) materials, tools and			n							Open
A.5	Permission for the Seller's employees to enter the Buyer's country (a.o. visa,		Invitation letter to be	n							Open
A.6	Permission for the Seller's employees to work in the Buyer country/site (a.o.			n							Open
B	INSURANCE										
B.1	Transport of equipment, (consumption-) materials and tools/machines			y		x			x		Confirmed
B.2	CAR (construction all risk), minimum treshhold €50.000 per instance			y			x			x	Confirmed
C	INSPECTIONS AND TESTS										
C.1	Pressure and/or xray testing of the equipment and piping as required by law to			n							Open
C.2	Inspection of the Buyer's preparatory work			n							Open
C.3	Quality inspection of process and utility piping			n							Open
C.4	Calibration of instrumentation			y		x			x		Confirmed
C.5	I/O testing			n							Open
C.6	Dry test			n							Open
C.7	Wet test			n							Open
D	PACKING, TRANSPORT, RECEPTION, RETURNS										
D.1	Marking of the equipment as required by law regulations or directives			y		x			x		Confirmed
D.2	Marking of the transport cases / boxes as required by law regulations or			y		x			x		Confirmed
D.3	Reception and unloading of the containers / crates / boxes / cases / etc wih the			y		x			x		Confirmed
D.4	Positioning of the packed goods on site			y		x			x		Confirmed
D.5	Supervision of reception and unloading of the containers / crates / boxes / cases			y		x			x		Confirmed
D.6	Supervision on positioning of the packed goods on site			y		x			x		Confirmed
D.7	Storage on site before unpacking		Buyer to appoint	y		x			x		Confirmed
D.8	Covering of the goods before unpacking on site			y		x			x		Confirmed
D.9	Covering of the goods after unpacking on site			y		x			x		Confirmed
D.10	Storage on site after unpacking			y		x			x		Confirmed
D.11	Supervision on unpacking			y		x			x		Confirmed
D.12	Transport of the equipment on site			y		x			x		Confirmed
D.13	Lockable storage areas/ facilities on site			y		x			x		Confirmed
D.14	Storekeeper in charge of the storage			y		x			x		Confirmed
D.15	Security of Seller's equipment, (consumption-) materials and tools/machines			y		x			x		Confirmed
D.16	Ownership of surplus materials			y		x			x		Confirmed
D.17	Removal of surplus materials from site			y		x			x		Confirmed
D.18	Return of surplus materials			y		x			x		Confirmed

v.4	2/27/2017	BUYER & SELLER OBLIGATION LIST									
	Buyer	Heineken Vietnam Brewery - Vung Tau JSC.	This document determines responsibilities regarding selected items/facilities which Buyer and/or Seller shall arrange and/or pay. Items selected as not applicable are irrelevant to the agreement between Buyer and Selller unless it can be clearly shown that such an omission was made by error.								
	Seller										
	Project	Heineken Vietnam Brewery - Vung Tau, Phase 5.1									
	Project No	VN1266									
						Arranged			Paid		
	INCO term:	DAP	Incoterms 2010 Apply								
	Containers:	Liner owned OR Second hand certified shippers owned containers which will/will not become property of the Buyer on moment of arriving at Buyers site	Numbe rof containers	Applicable		Seller	Buyer		Seller	Buyer	
#	Item/facility		Comment on item/facility								Confirmed (agreed / understood) by
D.21	Collection of surplus installation material			y		x			x		Confirmed
D.22	Packing of surplus installation material and defect/broken items for			y		x			x		Confirmed
D.23	Return of tools and/or machines			y		x			x		Confirmed
D.24	Packing of tools and machines			y		x			x		Confirmed
E	PROVISIONS FOR SELLER'S EMPLOYEES ON SITE										
E.1	Flight tickets for the Seller's employees			n							Open
E.2	Arrival tax			n							Open
E.3	Departure tax			n							Open
E.4	Local transport facilities between Airport and accommodation and/or Buyer's			n							Open
E.5	Local transport facilities between place of accommodation and Buyer's site			n							Open
E.6	Lodging for the Seller's employees			y		x			x		Confirmed
E.7	Furnished site office for the Seller's employees			y		x			x		Confirmed
E.8	Telephone on site for project related calls			y		x			x		Confirmed
E.9	Internet connection, for project related usage			y		x			x		Confirmed
E.10	Dressing rooms with washing facilities			y		x			x		Confirmed
E.11	Canteen facilities for Seller's employees			y		x			x		Confirmed
E.12	Lockable toilets			y		x			x		Confirmed
E.13	Workshop facilities			y		x			x		Confirmed
E.14	Interpreter		English is the project	y		x			x		Confirmed
E.15	Language sellers employees (incl delivery truck drivers etc)		English is the project	y		x			x		Confirmed
F	INSTALLATION SUPPLIES ON SITE										
F.1	Lifting equipment (Forklift trucks, reach trucks)			y		x			x		Confirmed
F.2	Transport equipment			y		x			x		Confirmed
F.3	Cranage / Hoisting plan			y		x			x		Confirmed
F.4	Cranage (hoisting)			y		x			x		Confirmed
F.5	Operators for lifting, cranage and/or transport equipment			y		x			x		Confirmed
F.6	Scaffolds			y		x			x		Confirmed
F.7	Ladders			y		x			x		Confirmed
F.8	Electric power distribution panel per area (LV)		For construction works	y		x			x		Confirmed
F.9	Standby generator in case of power failure		For construction works	y		x			x		Confirmed
F.10	All welding equipment			y		x			x		Confirmed
F.11	Welding gasses (argon gas, other welding gasses)			y		x			x		Confirmed
F.12	Other consumption materials		Electrodes; grinding	y		x			x		Confirmed
F.13	Water and drains			y		x			x		Confirmed
F.14	Compressed air			y		x			x		Confirmed
F.15	Installation tools & machinery			y		x			x		Confirmed
F.16	Illumination during installation (next to normal building lighting)			y		x			x		Confirmed

2.1. Preliminary notes

2.1.1 Provide all stationary throughout the contract:
- Paper A4/A3;
- Note blocks;
- Pens;
- Toilet paper;
- Coffee;
- Drinking water (Lavie);
- Daily cleaning of site office / toilets / pantry etc..

2.1.2 The Employer shall arrange for the provision of electricity and water to the Site.

2.1.3 The Contractor shall be responsible for tie-in to these supply-points and for all pipes, valves, cables, switchboards and the like at the Site.

2.1.4 HBC shall also NOT pay for the consumption of electricity and water

2.4. Material List

HOABINH

CÔNG TY CỔ PHẦN TẬP ĐOÀN XÂY DỰNG HOÀ BÌNH

HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY

PROJECT: HEINEKEN VIETNAM BREWERY-VUNG TAU PHASE 5.1

Date: 11 June 2018

MATERIAL LIST AND SUB-CONTRACTOR PROPOSAL

No	Code	Item	Base Tender			Sub-Contractor	Supplier's proposal			Remarks
			Specification	Brand Name	Origin		Specification	Brand Name	Origin	
Structure										
1		Concrete	-Lean concrete (B7.5) -Foundation,Column, Beam, Slab<20m(B30) -Slab >=20 (Low shrinkage concrete B30) -Water tank (Low shrinkage concrete B30)	Viet Han, Le Phan, The Gioi Nha or equivalent	Vietnam					
2		Rebar	SD235 (D<10mm) SD390 (D>=10mm)	Hoa Phat, Pomina, Posco SS Vina or equivalent	Vietnam					
3		Formwork	Pheolic Filmed Plywood (18mm thickness)	Local Suppliers	Vietnam					
4		Girder Wall Formwork System	As defined in specification of suppliers	Peri or equivalent	Germany					
5		Cement	OPC CEM I class 42.5N or approved equivalent complying in all respects with the requirements of BS-EN 197-1 and approved international Standard.	Insee, Ha Tien 1	Vietnam					
6		Crushed aggregate	As defined in BS EN 12620	Dong Nai/ Binh Duong, or equivalent	Vietnam					
7		Sand	As defined in specification	Dong Nai/ Binh Duong, or equivalent	Vietnam					
8		Polyethylene sheeting	As defined in specification	Local	Vietnam					
9		Termite treatment	Lenfos 50EC (1.2%)	Lenfos 50EC	UK	Hanh Tinh Xanh, VFC-PestMan				
10		Concrete Protective Liner	Concrete protective liners made of HDPE plates, a thickness of 3 mm, anchor burls (height minimum 10 mm), about 420 burls per m² .	AGRU: Sure-Grip ® System or equivalent	USA					
11		Waterstop	PVC water stop	Sika or equivalent	Viet Nam					
Architecture										
FLOOR FINISHING										
1	F1	Non metalic floor hardener with dust proofer	A non-metallic dry shake floor hardener with a minimum rate of 5 kg/m² or clear liquid hardener	Sika (Hardener – Sikafloor – 2 Syntop)	Vietnam	Viet Dai Thanh or equivalent				

Page 1

2.5. Suppliers/ Sub-con List

LIST OF MATERIALS TO BE USED AT SITE (CSA)
PROJECT NAME : HEINEKEN VIETNAM BREWERY - VUNG TAU PHASE 5.1
ITEM : HOÀN THIỆN SÀN

HOABINH

No	Item	Tên nhà cung cấp Nhà thầu phụ	Tên người liên hệ	Số điện thoại	Email
1	HPDE LINERS	SDT Group Co., Ltd	Do Quoc Hung	919991188	hungdq@sdt.com.vn
2	F1. Non metalic floor hardener with dust proofer	1.Sika 2.Decocrete 3.Flowcrete 4.Stonclad 5.Basf 6.Nam Jang 7.Bách Mỹ 8.Công ty Nhật Hoa 9.Công ty Phước Đông Hải 10.Công ty Gia Phát	1.Ms Diệp 2.Ms Ngọc 3.Ms Bình 4.Mr Pham Van Tu 5.Ms Diễm / Mr Việt 6.Mr Giang 7.Ms Đông / Mr Thành 8.Mr Pháp 9.Mr Quân 10.Mr Cường	1.0933 296 208 2.01203549709 3.0974 471480 4.0934 575 759 5.0907967279 5.0908 875 175 6.0909 400 428 7.094 150 7227 7.0964039387 8.0902 789 303 9.0913 172 837 10.0918451381	1.dinhdangngoc.diep@vn.sika.com/ diepdinh.sk@gmail.com 2.Ngoc Dang <ngoc@decocrete.eu> 3.Nguyen Thuy Binh <Binh.NguyenThuy@flowcrete.com> 4.tupham@industrialfloor.com.vn 5.Kieu Diem Huynh <kieudiem.huynh@basf.com> 5.Quoc Viet Nguyen <quocviet.nguyen@basf.com> 6.Xuan Giang Eco <namjangvinacons@gmail.com> 7.Kim Dong <dong.le@bachmygroup.vn> 7.'Le Duc Thanh' <leducthanh@bachmygroup.vn> 8.Doan Tu Phap <phap.doan@nhathoa.com> 9.http://superflatfloor.vn <anhquanxn@gmail.com> 10.cuong.nguyen@cuongqianphat.com
3	F3.1. Granite tiles	1.Bạch Mã 2. Đồng Tâm	1.Mr Đông 2.Mr Nhân	0903 023 600 0934-099-357	dongvnproject@gmail.com nhannt3@dongtam.com.vn
4	F3.2. Ceramic tiles, 300x300	1.Bạch Mã 2. Đồng Tâm	1.Mr Đông 2.Mr Nhân	0903 023 600 0934-099-357	dongvnproject@gmail.com nhannt3@dongtam.com.vn
5	F4. Epoxy floor system, Stonclad or equivalent	1.Sika 2.Decocrete 3.Flowcrete 4.Stonclad 5.Basf 6.Nam Jang 7.Bách Mỹ 8.Công ty Nhật Hoa 9.Công ty Phước Đông Hải	1.Ms Diệp 2.Ms Ngọc 3.Ms Bình 4.Mr Pham Van Tu 5.Ms Diễm / Mr Việt 6.Mr Giang 7.Ms Đông / Mr Thành 8.Mr Pháp 9.Mr Quân	1.0933 296 208 2.01203549709 3.0974 471480 4.0934 575 759 5.0907967279 5.0908 875 175 6.0909 400 428 7.094 150 7227 7.0964039387 8.0902 789 303 9.0913 172 837	1.dinhdangngoc.diep@vn.sika.com/ diepdinh.sk@gmail.com 2.Ngoc Dang <ngoc@decocrete.eu> 3.Nguyen Thuy Binh <Binh.NguyenThuy@flowcrete.com> 4.tupham@industrialfloor.com.vn 5.Kieu Diem Huynh <kieudiem.huynh@basf.com> 5.Quoc Viet Nguyen <quocviet.nguyen@basf.com> 6.Xuan Giang Eco <namjangvinacons@gmail.com> 7.Kim Dong <dong.le@bachmygroup.vn> 7.'Le Duc Thanh' <leducthanh@bachmygroup.vn> 8.Doan Tu Phap <phap.doan@nhathoa.com> 9.http://superflatfloor.vn <anhquanxn@gmail.com>
	F6. Raised computer floor, anti	1.Công ty TNHH America Indochina Management	1.Ms. Cường	1.0933 979 066 2.0932156190	1.kimcuong.lam@aim.vnn.vn

Hoàn thiện sàn | Hoàn thiện tường | Trần và vách | Alu; Metal; Door

MATERIALS TO BE USED AT SITE (CSA)
NAME : HEINEKEN VIETNAM BREWERY - VUNG TAU PHASE 5.1
ÀN THIỆN TƯỜNG

HOABINH

Material	Tên nhà cung cấp Nhà thầu phụ	Tên người liên hệ	Số điện thoại	Email
Skirting				
S3. Ceramic plinth tile	1.Bạch Mã 2. Đồng Tâm	1.Mr Đông 2.Mr Nhân	1.0903 023 600 2.0934-099-357	1.dongvnproject@gmail.com 2.nhannt3@dongtam.com.vn
S4. Epoxy paint h=300mm	1.Nippon 2.Dulux 3.Kova 4.Jotun 5.Kretop	1.Ms Quỳnh 2.Mr Khiêm 3.Ms Tuyền 4.Ms Thư 5.Mr Minh	1.0909 996 851 2.0938 324 677 3.0907068592 4.0903 955 492 5.0938.902.975	1.quynh.lt.hcmc@nipponpaint.com.vn 2.nhatkhiem.vu@akzonobel.com 3.gms.bichtuyen@gmail.com 4.hoang.ngoc.thu.nguyen@jotun.com 5.nguyenminh@kretop.com.vn
S5. Aluminium skirting	1.PTM 2. Hồng Môn	1.Mr Thành 2.Mr Trần	1.0934 99 55 33 2.0919.039.668	1.thanhnt.ptm@gmail.com 2.vnhongmen@gmail.com
Wall				
W1.1. Plaster with emulsion paint	1.Nippon 2.Dulux 3.Kova 4.Jotun	1.Ms Quỳnh 2.Mr Khiêm 3.Ms Tuyền 4.Ms Thư	1.0909 996 851 2.0938 324 677 3.0907068592 4.0903 955 492	1.quynh.lt.hcmc@nipponpaint.com.vn 2.nhatkhiem.vu@akzonobel.com 3.gms.bichtuyen@gmail.com 4.hoang.ngoc.thu.nguyen@jotun.com
W1.2. Plaster with epoxy paint	1.Nippon 2.Dulux 3.Kova 4.Jotun	1.Ms Quỳnh 2.Mr Khiêm 3.Ms Tuyền 4.Ms Thư	1.0909 996 851 2.0938 324 677 3.0907068592 4.0903 955 492	1.quynh.lt.hcmc@nipponpaint.com.vn 2.nhatkhiem.vu@akzonobel.com 3.gms.bichtuyen@gmail.com 4.hoang.ngoc.thu.nguyen@jotun.com
W1.3. Plaster with epoxy paint up to indicated level of 1000mm, above emulsion paint	1.Nippon 2.Dulux 3.Kova 4.Jotun	1.Ms Quỳnh 2.Mr Khiêm 3.Ms Tuyền 4.Ms Thư	1.0909 996 851 2.0938 324 677 3.0907068592 4.0903 955 492	1.quynh.lt.hcmc@nipponpaint.com.vn 2.nhatkhiem.vu@akzonobel.com 3.gms.bichtuyen@gmail.com 4.hoang.ngoc.thu.nguyen@jotun.com
W1.4. Plaster with ceramic tile	1.Bạch Mã 2. Đồng Tâm	1.Mr Đông 2.Mr Nhân	1.0903 023 600 2.0934-099-357	1.dongvnproject@gmail.com 2.nhannt3@dongtam.com.vn
W1.5. Plaster with ceramic tile upto indicated level of +2.40	1.Bạch Mã 2. Đồng Tâm	1.Mr Đông 2.Mr Nhân	1.0903 023 600 2.0934-099-357	1.dongvnproject@gmail.com 2.nhannt3@dongtam.com.vn

Page 1
Page 1

SPECIFICATION NOTES

CONCRETE WORKS

Concrete type	A	B	C	D
Type	Lean concrete	Strcutural Concrete	Low shrinkage concrete	Low shrinkage concrete
Application	Blinding	Foundation, Column, Beam, Slab <20m	Slab ≥20m	Water Tank
Grade	B7.5	B30	B30	B30
Max. Aggregate size	¾" (19mm)	¾" (19mm)	¾" (19mm)	¾" (19mm)
Limits of aggregate: Cement ratio (by weight)	9.0 ÷ 11.0	≤ 4.8	≤ 4.0	≤ 4.0
Cement or Combination/m³ of concrete (min.)	Min. 175 kg/m³	Min. 340 kg/m³	Min. 360 kg/m³	Min. 380 kg/m³
Water : Cement Ratio (max.)	No requirements	Foundation: 80÷100mm Others: 100÷120m	All: 80÷100mm	All: 80÷100mm
Cement or Combination type	CEM I or Equivalent	CEM I or Portland fly ash CEM II/B-V (to be recommended)	CEM I or Portland fly ash CEM II/B-V (to be recommended)	CEM I or Portland fly ash CEM II/B-V (to be recommended)
Chloride content (kg/m³) in concrete		≤ 0.6	≤ 0.6	≤ 0.6
Admixtures		Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D	Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D	Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D Water proofing of admixture shall be required sor structural concrete retaining liquids.

SPECIFICATION NOTES

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Water : Cement Ratio (max.)	No requirements	Foundation: 80÷100mm Others: 100÷120m	All: 80÷100mm	All: 80÷100mm
Cement or Combination type	CEM I or Equivalent	CEM I or Portland fly ash CEM II/B-V (to be recommended)	CEM I or Portland fly ash CEM II/B-V (to be recommended)	CEM I or Portland fly ash CEM II/B-V (to be recommended)
Chloride content (kg/m³) in concrete		≤ 0.6	≤ 0.6	≤ 0.6
Admixtures		Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D	Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D	Water reducing admistures are according to specification and manufacturer 's recommendation (mid-range only): type A&D Water proofing of admixture shall be required sor structural concrete retaining liquids.

SPECIFICATION NOTES

AGRU@ - CONCRETE PROTECTIVE LINER FOR SLAB AND WALL

Product Data

Property	Test Method	Minimum Average Roll Values				
Thickness (nominal), mil (mm)	ASTM D5199	80 (2.0)	100 (2.5)	120 (3.0)	160 (4.0)	200 (5.0)
Density, g/cc, minimum (black) Density, g/cc, minimum (colored)	ASTM D792, Method B	0.94 0.935	0.94 0.935	0.94 0.935	0.94 0.935	0.94 0.935
Tensile Properties (ave. both directions) Strength @ Yield (min. ave.), lb/in width (N/mm)	ASTM D6693, Type IV 2 in/minute 5 specimens in each direction	176 (30.8)	220 (38.5)	264 (46)	352 (61)	440 (77)
Elongation @ Break (min. ave.), % (GL=2.0in)		300	300	300	300	300
Puncture Resistance (min. ave.), lbs. (N)	ASTM D4833	120 (537)	150 (625)	180 (750)	240 (1000)	300 (1250)
Carbon Black Content (range in %)	ASTM D4218	2 - 3	2 - 3	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion (Category)	ASTM D5596	Only near spherical agglomerates for 10 views: 9 views in Cat. 1 or 2, and 1 view in Cat. 3				
Stress Crack Resistance (Single Point NCTL), hours	ASTM D5397, Appendix	400	400	400	400	400
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O_2	≥140	≥140	≥140	≥140	≥140
Melt Flow Index, g/10 minutes	ASTM D1238, 190°C, 2.16kg	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Pull Out Resistance psf (kN/m^2)	ISO 4624	16,500 (800)				
Back Pressure Resistance long term	SKZ-Test 700mm x 700mm	1000 hour at 1.5 bar (21.76 psi)				
Oven Aging with HP OIT, (% retained after 90 days)	ASTM D5721 ASTM D5885, 150°C, 500psi O_2	80	80	80	80	80
UV Resistance with HP OIT, (% retained after 1600 hours)	ASTM D7238 ASTM D5885, 150°C, 500psi O_2	20hr. Cycle @ 75°C/4 hr. dark condensation @ 60°C 50	50	50	50	50

SPECIFICATION NOTES

AGRU@ - CONCRETE PROTECTIVE LINER FOR SLAB AND WALL

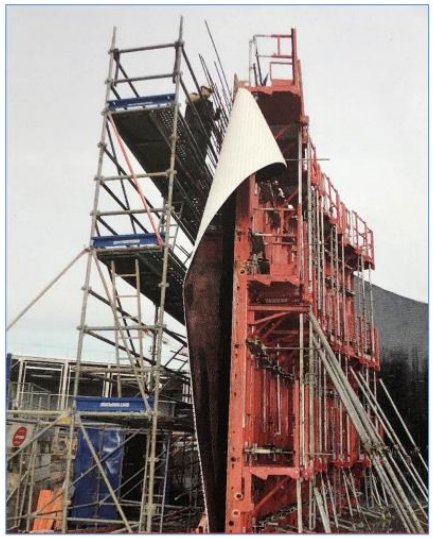
Lompet in Plasti

TECHNICAL INFORMATION
DESIGN & INSTALLATION HANDBOOK

AGRU Concrete Protective Liner
(Cast-in-Site Installation)

After manufacturing each single roll is packed into a protective film which then is marked with all necessary/ specified CPL identification prior to transport.

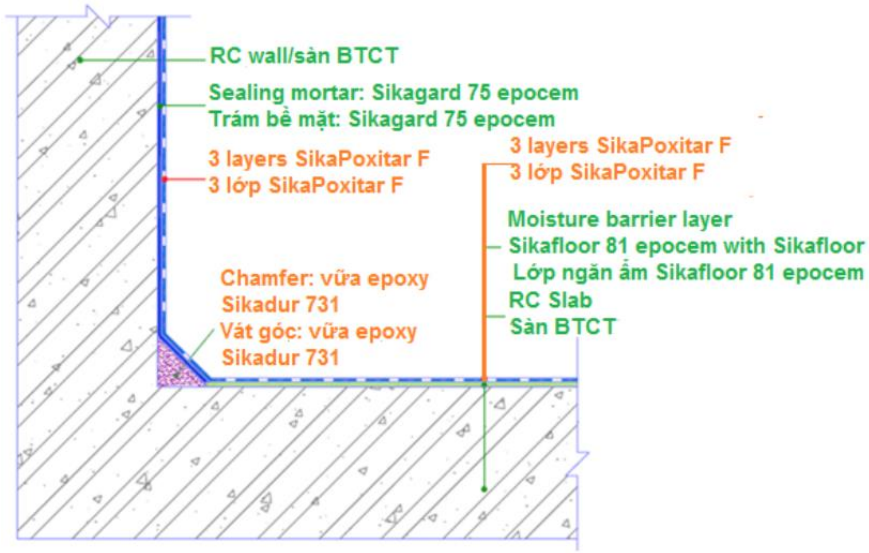
Storage of Sure Grip Concrete Protective Liner Plates



SPECIFICATION NOTES

WATERPROOFING FOR WWTP

SYSTEM BUILD-UP



1. Sikafloor Repair EpoCem Module: Sikafloor Repair EpoCem Module is 2-components, water based epoxy resin dispersion.

Uses: Sikafloor Repair EpoCem Module is an universal primer for Sikafloor 81 EpoCem and Sikagard 75 top coat.

2. Sikafloor®-81 EpoCem: Sikafloor-81 EpoCem is 3-pack, epoxy-modified cementitious, self-levelling mortars.

Uses: Sikafloor-81 EpoCem is used as a temporary moisture barrier (min. 2 mm thick) for mentioned above system.

3. Sikagard-75 EpoCem: A three component epoxy-modified cementitious mortar.

Uses: Sikagard-75 EpoCem is used as a thin sealer coat and temporary moisture barrier (1.5 mm thick) for mentioned above system.

4. Sika Poxitar F: Sika Poxitar F is a resistant 2-pack reaction hardening coating of low solvent content based on an epoxy-anthracene-oil combination with mineral fillers.

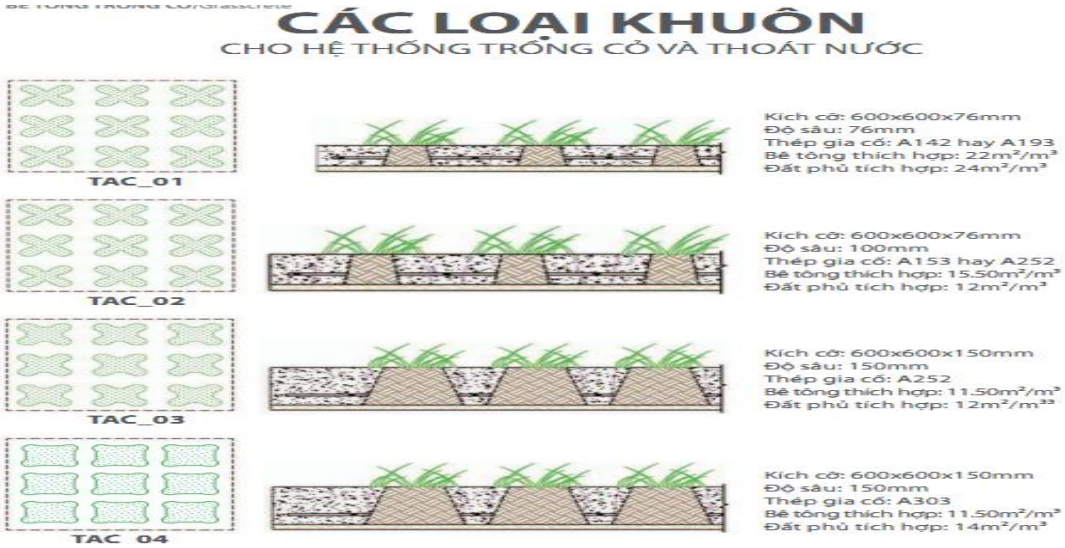
Uses: Sika Poxitar F is used as a waterproofing, chemical coating system for waste water tank.

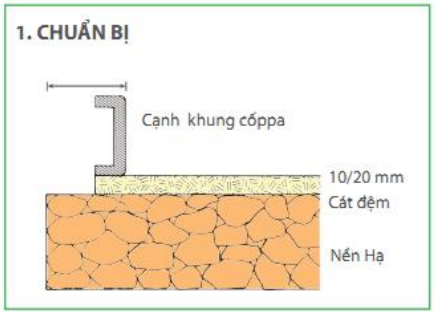
Characteristics/ Advantages:

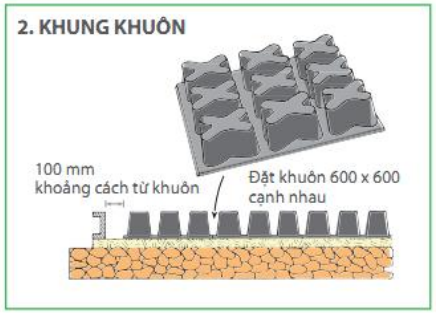
- *Tough hard, robust abrasion and impact resistant;*
- *Excellent resistance to water, microbes and chemicals.*
- *Can be exposed to water immediately after application*

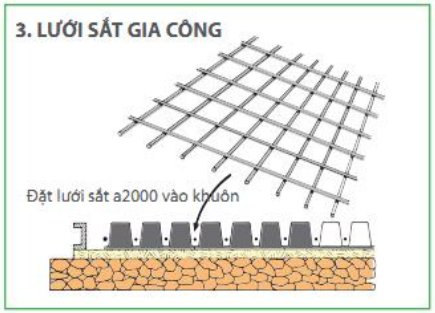
SPECIFICATION NOTES

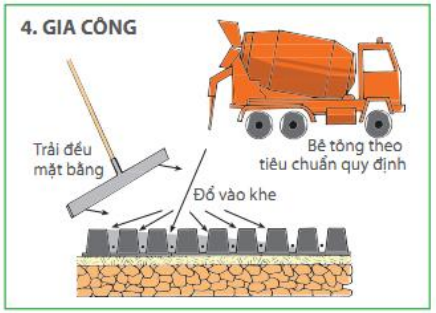
CONCRETE GRASS SPECIFICATION

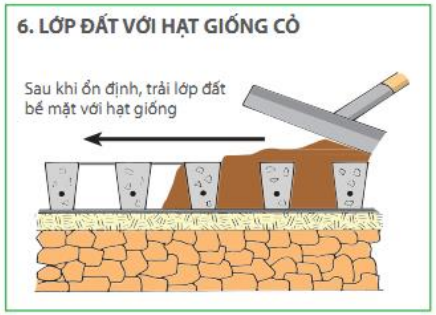






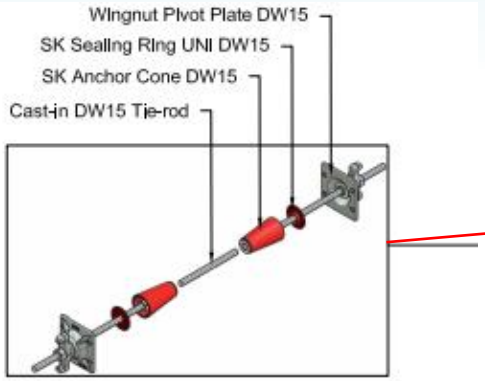




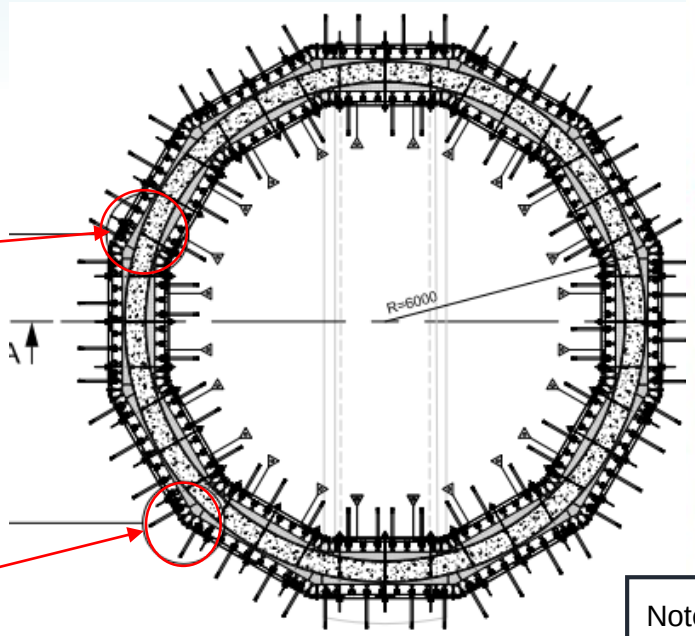


SPECIFICATION NOTES

Formwork Plan / formwork for wall WWTP



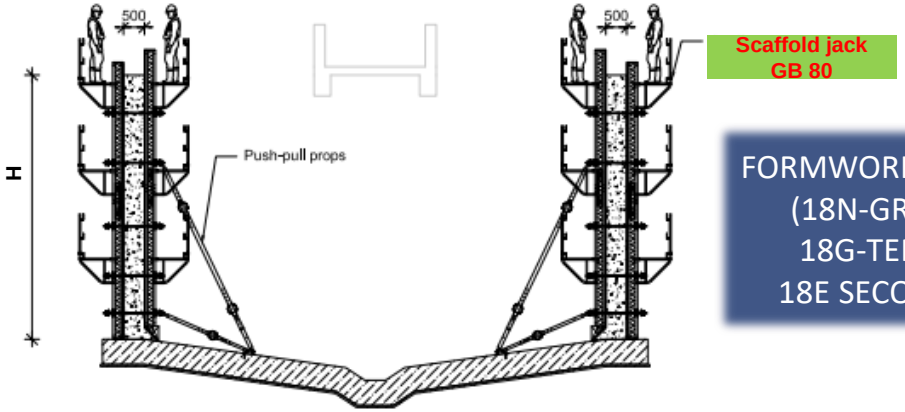
SK Cone Wall Ties - Water Proof Tie.



GRAVITY THICKENER LAYOUT PLAN
SCALE: 1/100

Vario Coupling VKZ is used connection of SRZ or SRU steel walers.

Note:
- LENGTH OF CONCRETING BLOCK <20 m

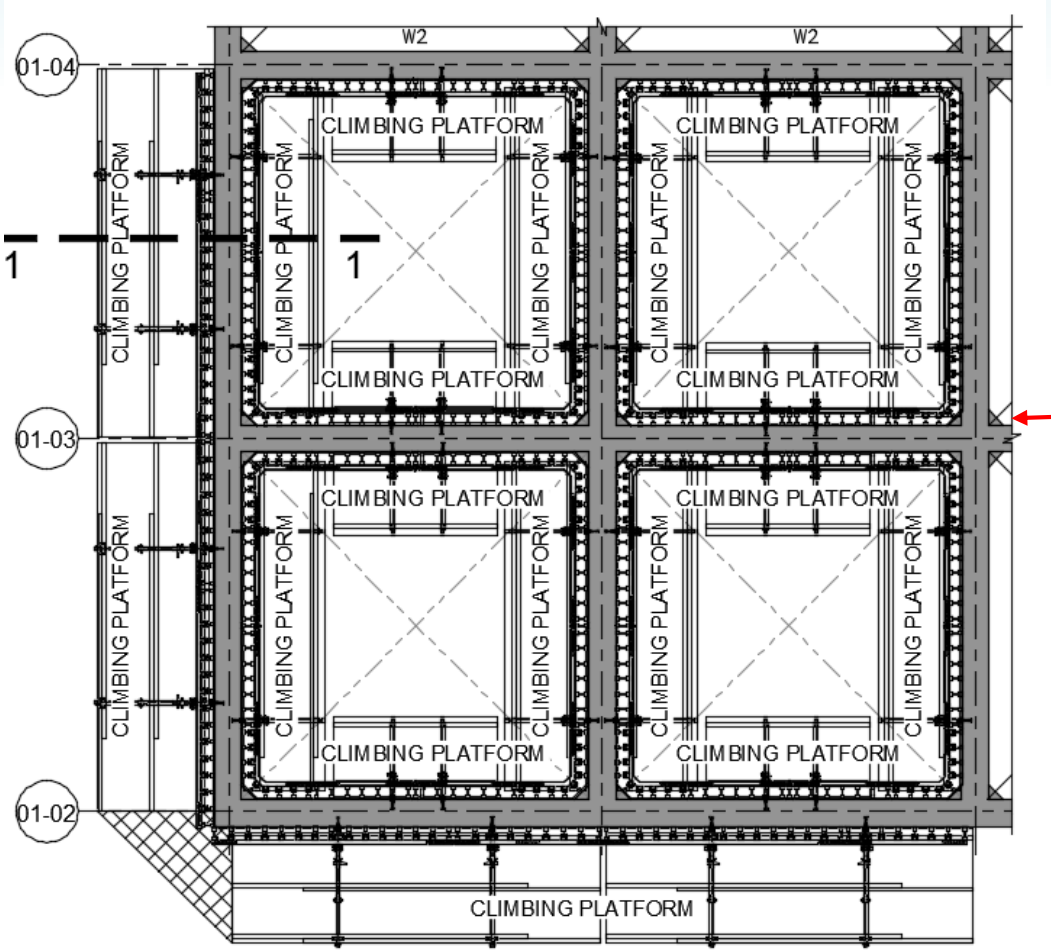


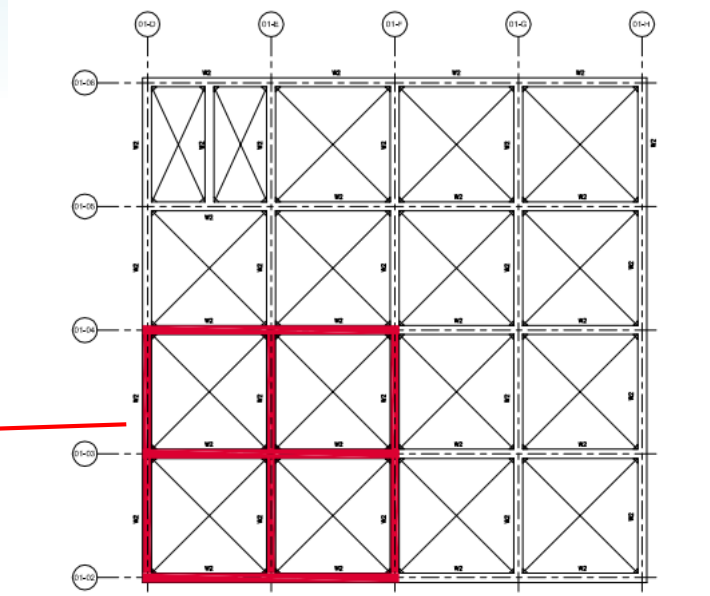
SECTION A-A
SCALE: 1/100

FORMWORK METHOD FOR WALL
(18N-GRAVITY THICKENER
18G-TERTIARY CLARIFIER
18E SECONDARY CLARIFIER)

SPECIFICATION NOTES

Formwork Plan / Silo block





TYPICAL FORMWORK PLAN FOR SILO BLOCK

- NOTES: A special formwork system shall be used to ensure and achieved a fair faced concrete finish

2.5. MAJOR RISK NOTES

1/ Cung cấp bê tông bù co ngót: Đề nghị phòng vật tư/ mua hàng liên hệ ngay với các đơn vị cung cấp bê tông **Việt Hàn** tại địa bàn để chủ động thời gian và số lượng cung cấp bê tông bù co ngót gần 5000m3.

2/ Cung cấp tấm HPDE đặc biệt: Đề nghị phòng vật tư/ mua hàng liên hệ ngay với đơn vị cung cấp **SDT (phân phối độc quyền AGRU tại Việt Nam)** để cung cấp số lượng theo đơn hang cùng với các phụ kiện cần thiết trong quá trình thi công.

3/ Cung cấp hệ thống ván khuôn Peri: Đề nghị phòng vật tư/ mua hang liên hệ chốt đơn hàng với nhà cung cấp ván khuôn Peri để chốt được đơn hang với giá tốt nhất để tiến hành đặt hàng theo đúng thời gian leadtime.

03

CONSTRUCTION METHODOLOGY AND SCHEDULE

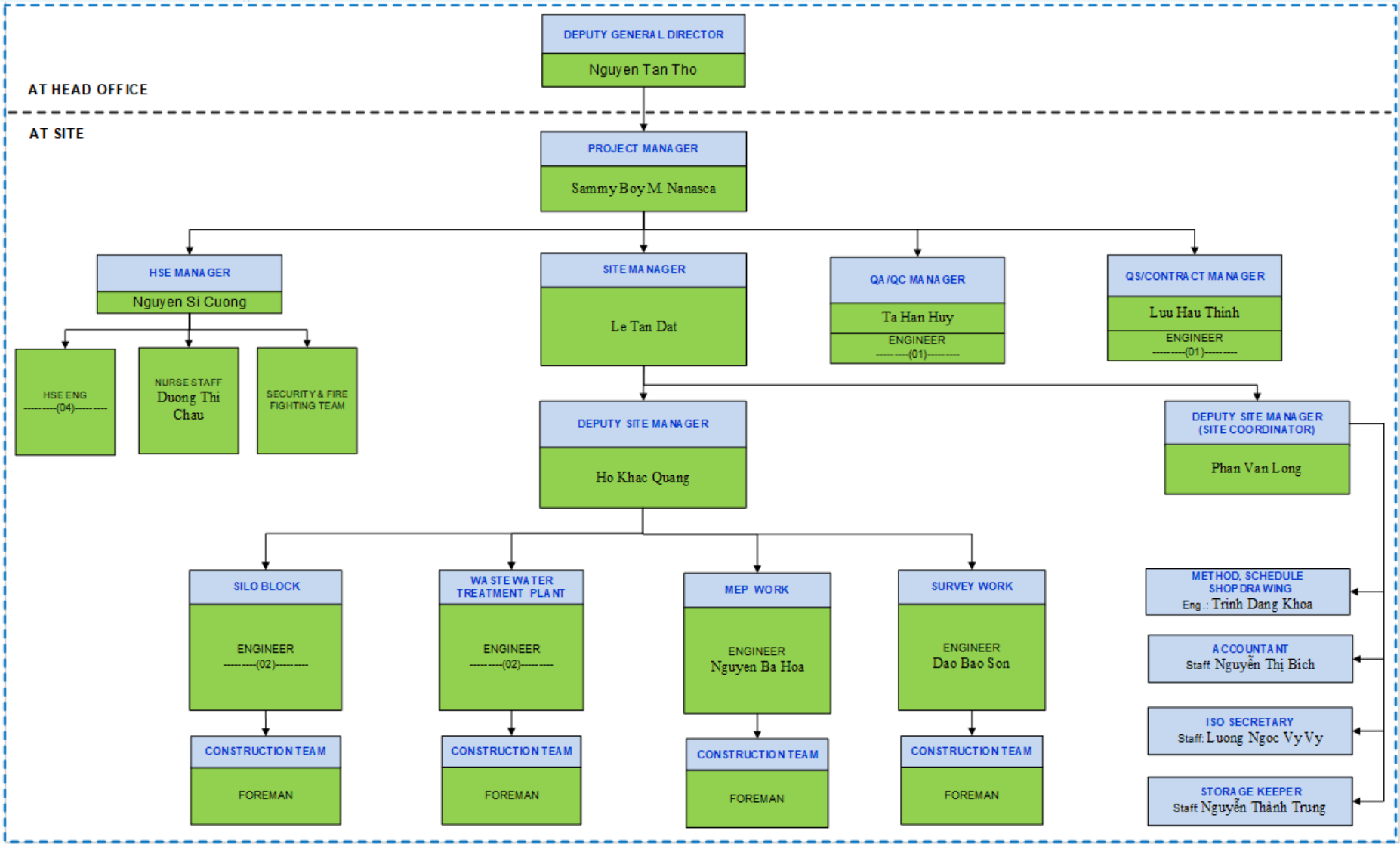
3.1 Schedule and milestones

3.2 Logistic Plan

3.3 Construction Methodology

3.4 Project summary information

Site Organization Chart

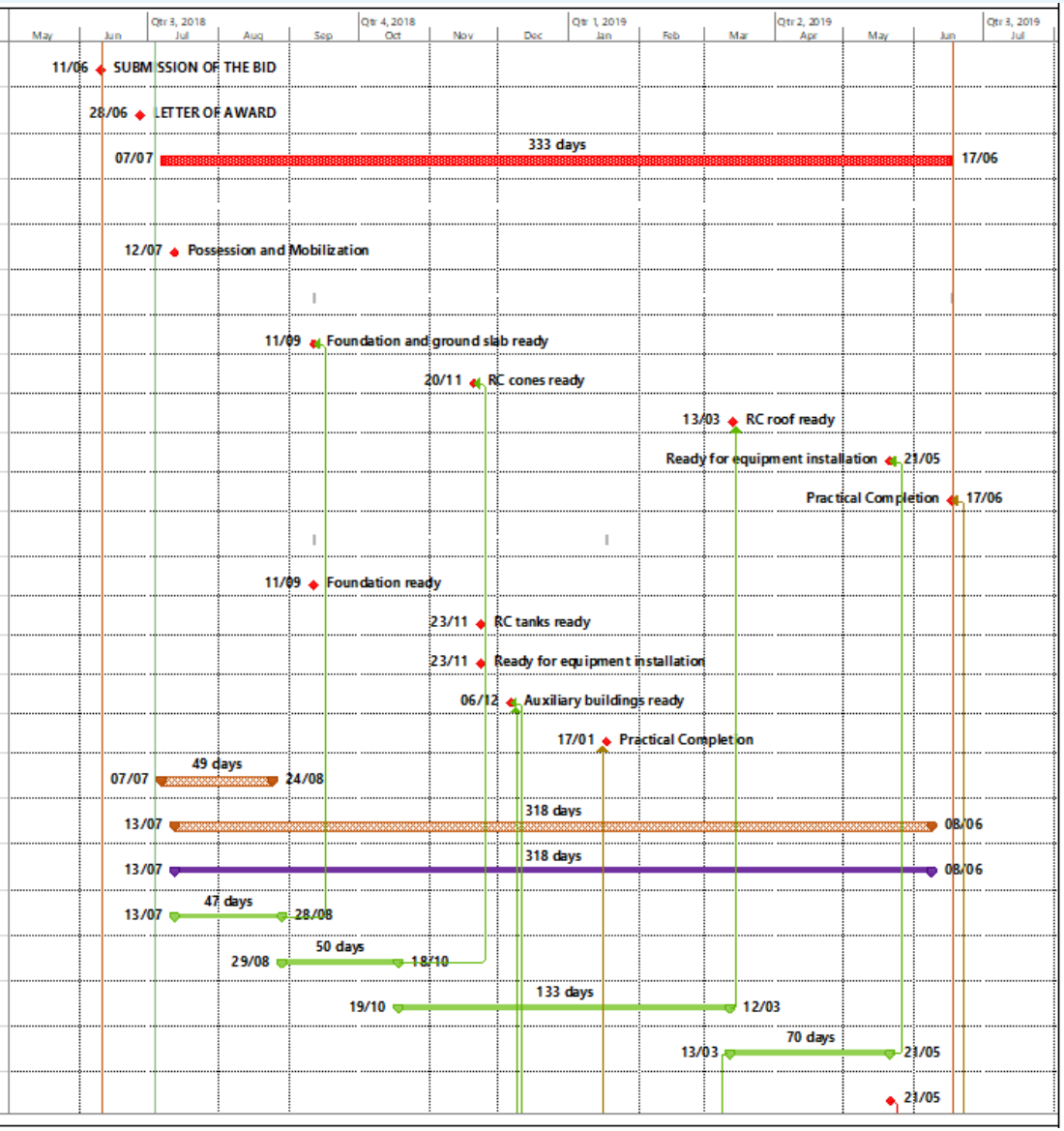


Construction Programme

SCHEDULE MILESTONES TP VI - CIVIL WORKS WWTP & SILO BLOCK		
Item	RHDHV	RHDHV
	Milestone	Updated Milestone
Silo Block		
Possession of Site & Mobilization	2-Jul-18	12-Jul-18
Foundations and ground slab ready	30-Aug-18	11-Sep-18
RC Cones ready	8-Nov-18	20-Nov-18
RC Roof ready	5-Mar-19	13-Mar-19
Ready for equipment installation	13 May 2019	21-May-19
Practical Completion	7-Jun-19	17-Jun-19
WWTP		
Possession of Site & Mobilization:	2-Jul-18	12-Jul-18
Foundations ready	30-Aug-18	11-Sep-18
RC Tanks ready*	27-Sep-18/18-Oct-18	23-Nov-18
Auxiliary buildings ready	6-Dec-18	6-Dec-18
Ready for equipment installation	25-Oct-18	23-Nov-18
Practical Completion	22-Nov-18	17-Jan-19
***) Contractors are allowed to delay 2-3 weeks on this milestone given complicating factor of HDPE liner.**		

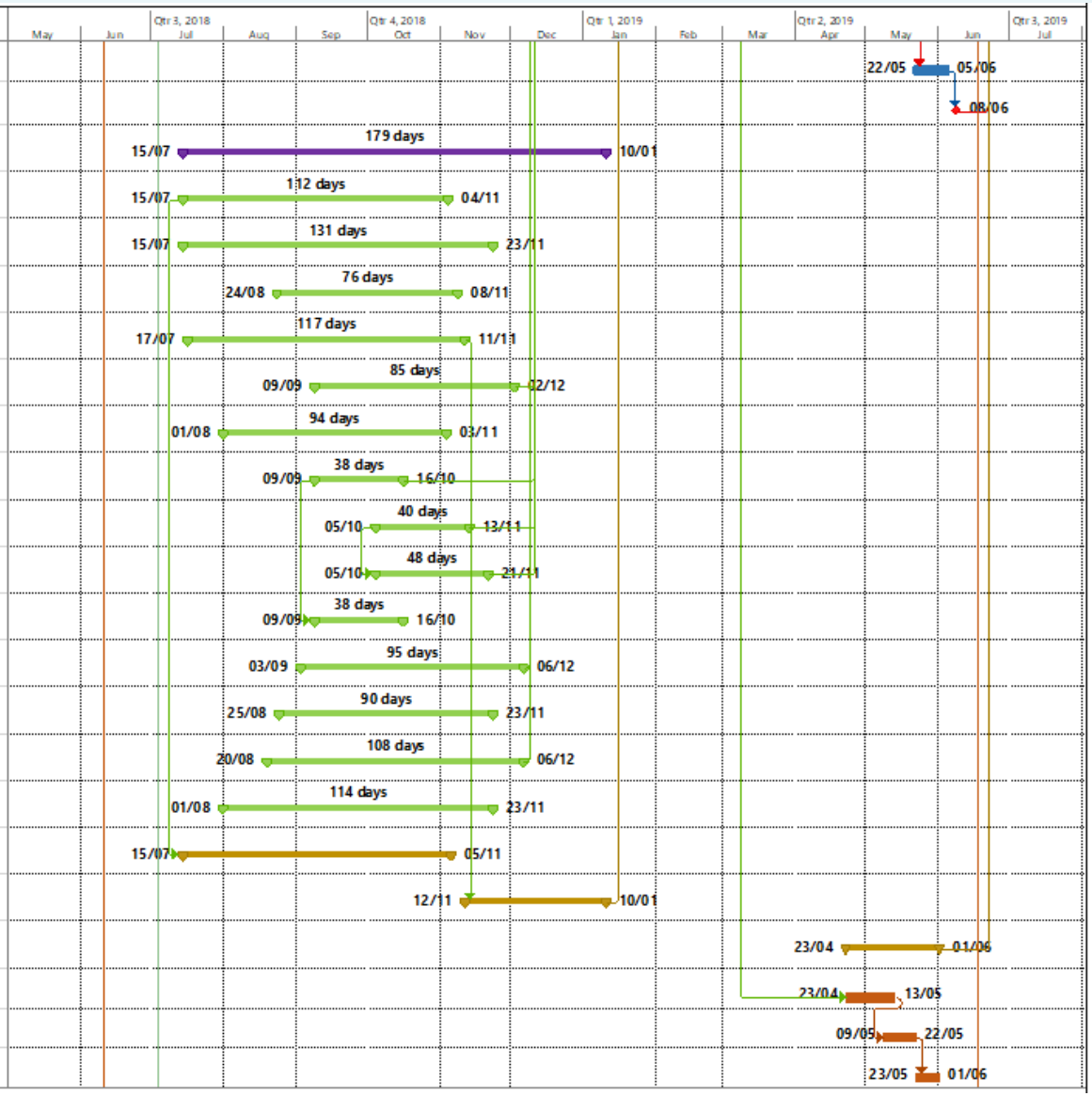
Construction Programme

ID	Task Name	Duration	Start	Finish
1	SUBMISSION OF THE BID	0 days	Mon 11/06/18	Mon 11/06/18
2	LETTER OF AWARD	0 days	Thu 28/06/18	Thu 28/06/18
3	TP VI_CIVIL WORKS FOR WWTP & SILO BLOCK	333 days	Sat 07/07/18	Mon 17/06/19
4	MILE STONES	327 days	Thu 12/07/18	Mon 17/06/19
5	Possession and Mobilization	0 days	Thu 12/07/18	Thu 12/07/18
6	Silo block	267 days	Tue 11/09/18	Mon 17/06/19
7	Foundation and ground slab ready	0 days	Tue 11/09/18	Tue 11/09/18
8	RC cones ready	0 days	Tue 20/11/18	Tue 20/11/18
9	RC roof ready	0 days	Wed 13/03/19	Wed 13/03/19
10	Ready for equipment installation	0 days	Tue 21/05/19	Tue 21/05/19
11	Practical Completion	0 days	Mon 17/06/19	Mon 17/06/19
12	Waste water treatment plant	128 days	Tue 11/09/18	Thu 17/01/19
13	Foundation ready	0 days	Tue 11/09/18	Tue 11/09/18
14	RC tanks ready	0 days	Fri 23/11/18	Fri 23/11/18
15	Ready for equipment installation	0 days	Fri 23/11/18	Fri 23/11/18
16	Auxiliary buildings ready	0 days	Thu 06/12/18	Thu 06/12/18
17	Practical Completion	0 days	Thu 17/01/19	Thu 17/01/19
18	PREPARATION STAGE	49 days	Sat 07/07/18	Fri 24/08/18
26	CONSTRUCTION PERIOD	318 days	Fri 13/07/18	Sat 08/06/19
27	1. SILO BLOCK	318 days	Fri 13/07/18	Sat 08/06/19
28	Foundation	47 days	Fri 13/07/18	Tue 28/08/18
37	RC column & cones	50 days	Wed 29/08/18	Thu 18/10/18
47	RC Silo Wall to Roof	133 days	Fri 19/10/18	Tue 12/03/19
62	Finishing works	70 days	Wed 13/03/19	Tue 21/05/19
69	Ready for equipment installation	0 days	Tue 21/05/19	Tue 21/05/19

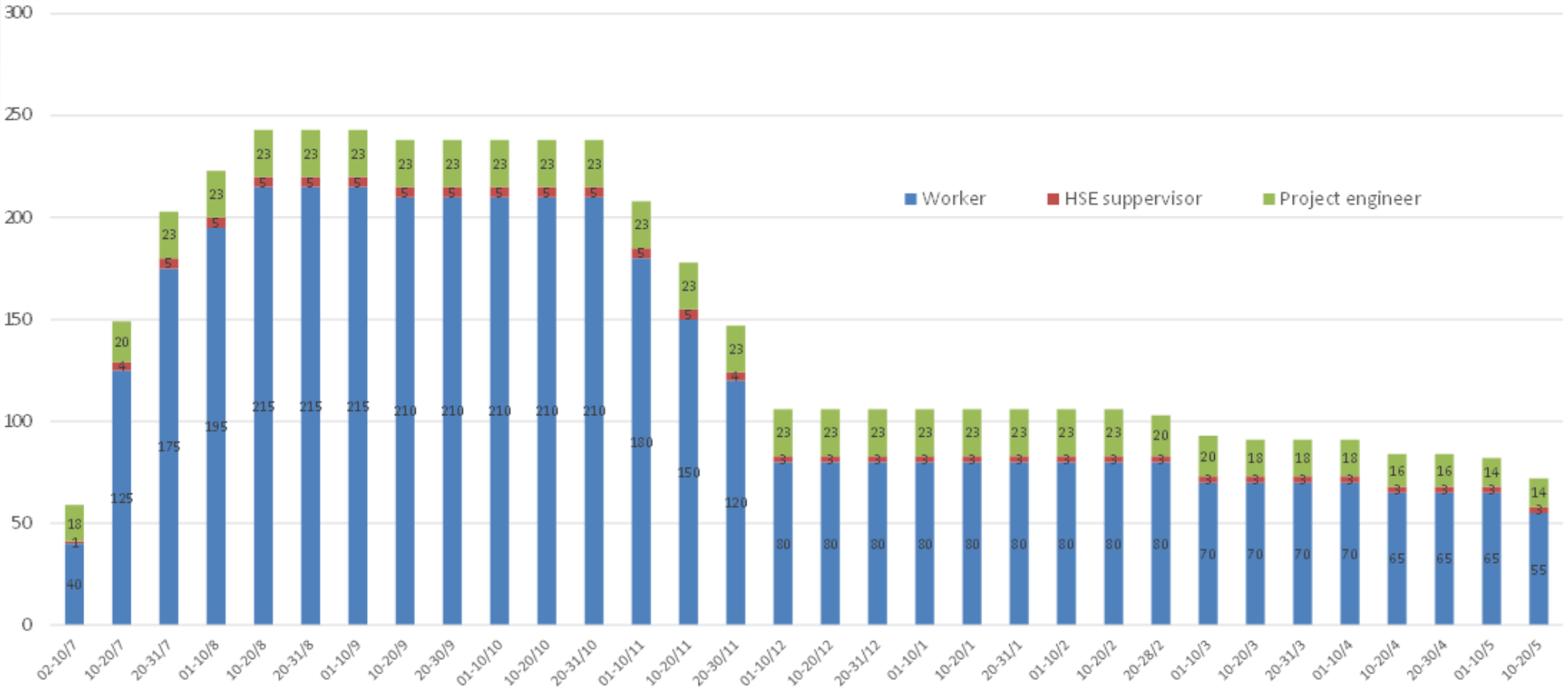


Construction Programmed

ID	Task Name	Duration	Start	Finish
70	Inspection and defect works for Silo block	15 days	Wed 22/05/19	Wed 05/06/19
71	Practial completion	0 days	Sat 08/06/19	Sat 08/06/19
72	2. WWTP (WASTE WATER TREATMENT PLANT)	179 days	Sun 15/07/18	Thu 10/01/19
73	18B. Influent Pump Pit (90m2)	112 days	Sun 15/07/18	Sun 04/11/18
88	18C. Equalization Tank, Anaerobic Sludge Storage (2200m2)	131 days	Sun 15/07/18	Fri 23/11/18
116	18D. Mixing Basin (49m2)	76 days	Fri 24/08/18	Thu 08/11/18
128	18E. Secondary Clarifier (660m2)	117 days	Tue 17/07/18	Sun 11/11/18
140	18F. Sludge Dewatering Building (135 m2)	85 days	Sun 09/09/18	Sun 02/12/18
150	18G. Tertiary Clarifier (420m2)	94 days	Wed 01/08/18	Sat 03/11/18
162	18H. Biofilter (66m2)	38 days	Sun 09/09/18	Tue 16/10/18
166	18J. Gasodrix Shed (48m2)	40 days	Fri 05/10/18	Tue 13/11/18
171	18K. Blower Shed (86m2)	48 days	Fri 05/10/18	Wed 21/11/18
176	18L. Influent Heat Exchanger + Cooling Towers Plinth (70m2)	38 days	Sun 09/09/18	Tue 16/10/18
180	18M. Control building (200m2)	95 days	Mon 03/09/18	Thu 06/12/18
197	18N. Gravity Thickener (140m2)	90 days	Sat 25/08/18	Fri 23/11/18
208	18Q. Chemical Building (120m2)	108 days	Mon 20/08/18	Thu 06/12/18
220	18P. Rapid Floculation Neutralization Disinfection Disc Filter Channel (300m2)	114 days	Wed 01/08/18	Fri 23/11/18
229	UNDER GROUND PIPING FOR WWTP & EARTHING SYSTEM	113 days	Sun 15/07/18	Mon 05/11/18
230	EXTERNAL WORKS AROUND WWTP	60 days	Mon 12/11/18	Thu 10/01/19
231	COMPLETE AND HANDOVER	40 days	Tue 23/04/19	Sat 01/06/19
232	Testing and comissioning	21 days	Tue 23/04/19	Mon 13/05/19
233	Defect inspection and rectification	14 days	Thu 09/05/19	Wed 22/05/19
234	Hanover, final Completion	10 days	Thu 23/05/19	Sat 01/06/19

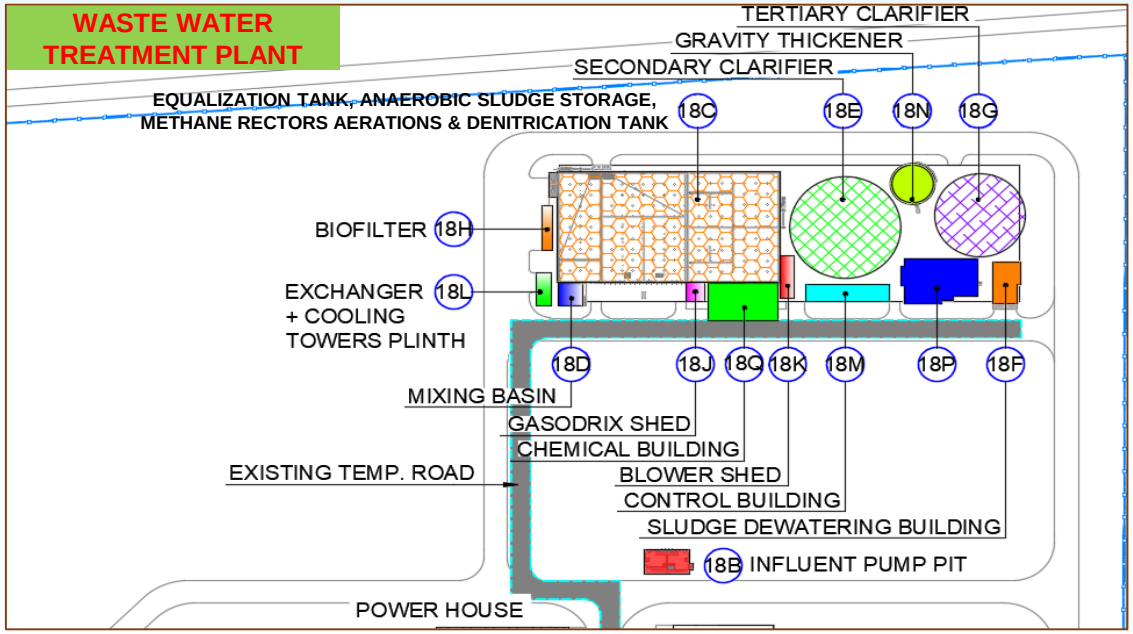


Manpower plan

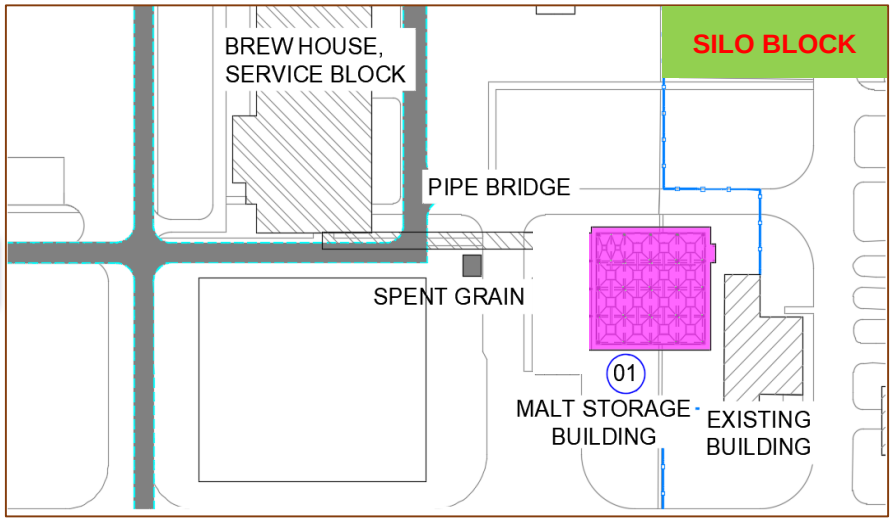


Project summary information

Tender Document for Methodology (from Client)



Master plan



TP VI_CIVIL WORKS WWTP & SILO BLOCK is include:

a) Architectural Drawings and Specification

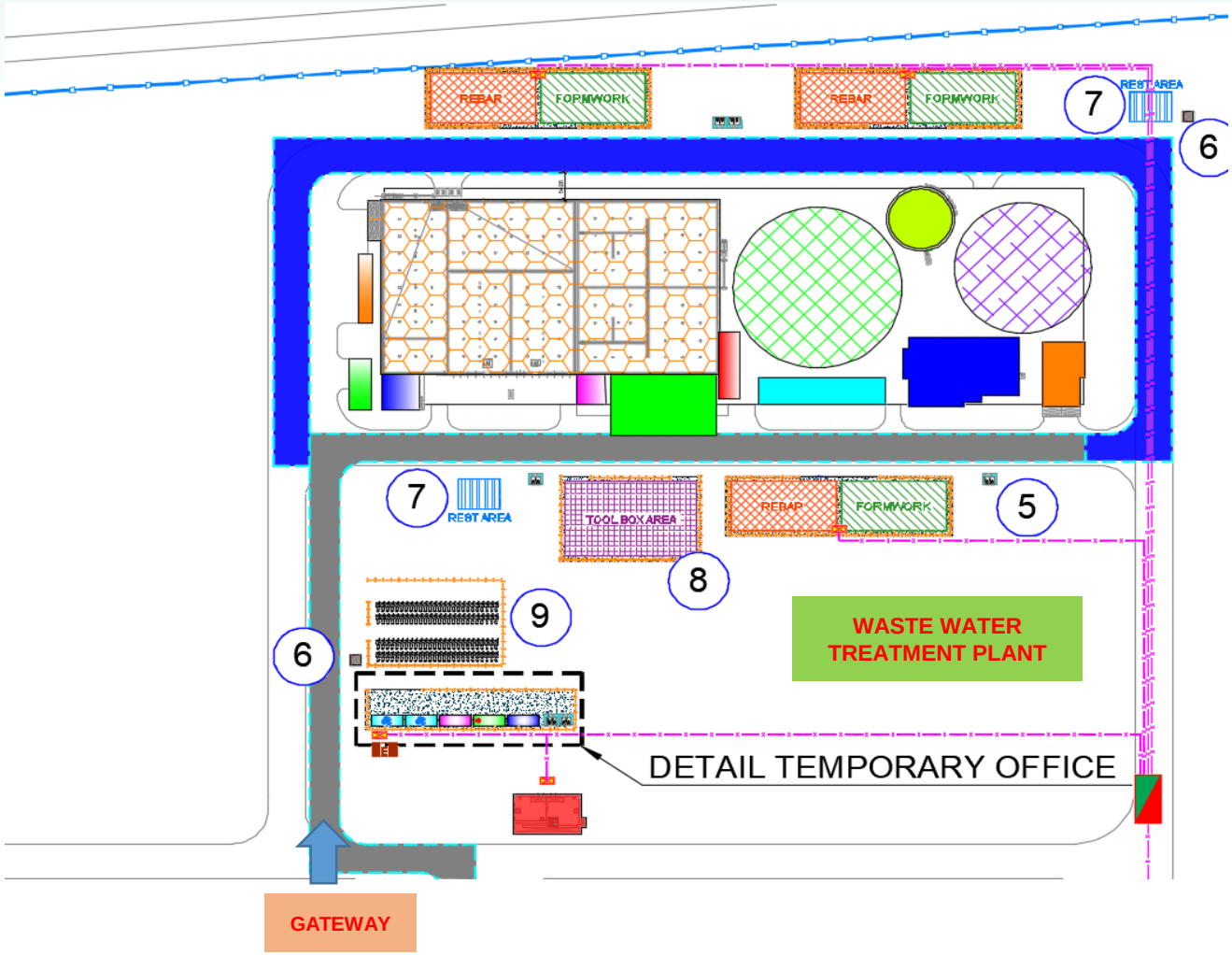
b) Structural Drawing and Specification

c) HSE Requirement

d) BOQ frame of TPV,…

Logistic Plan

Logistic Plan



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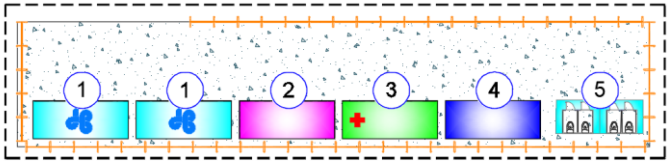


DETAIL TEMPORARY OFFICE

1 CONTRACTOR'S OFFICE (2 CONT.)	7 REST AREA
2 MEETING ROOM (1 CONT.)	8 TOOL BOX AREA
3 SAFETY ROOM (1 CONT.)	9 PARKING AREA
4 STORAGE	10 TOWER CRANE
5 TOILET	
6 GUARDHOUSE	

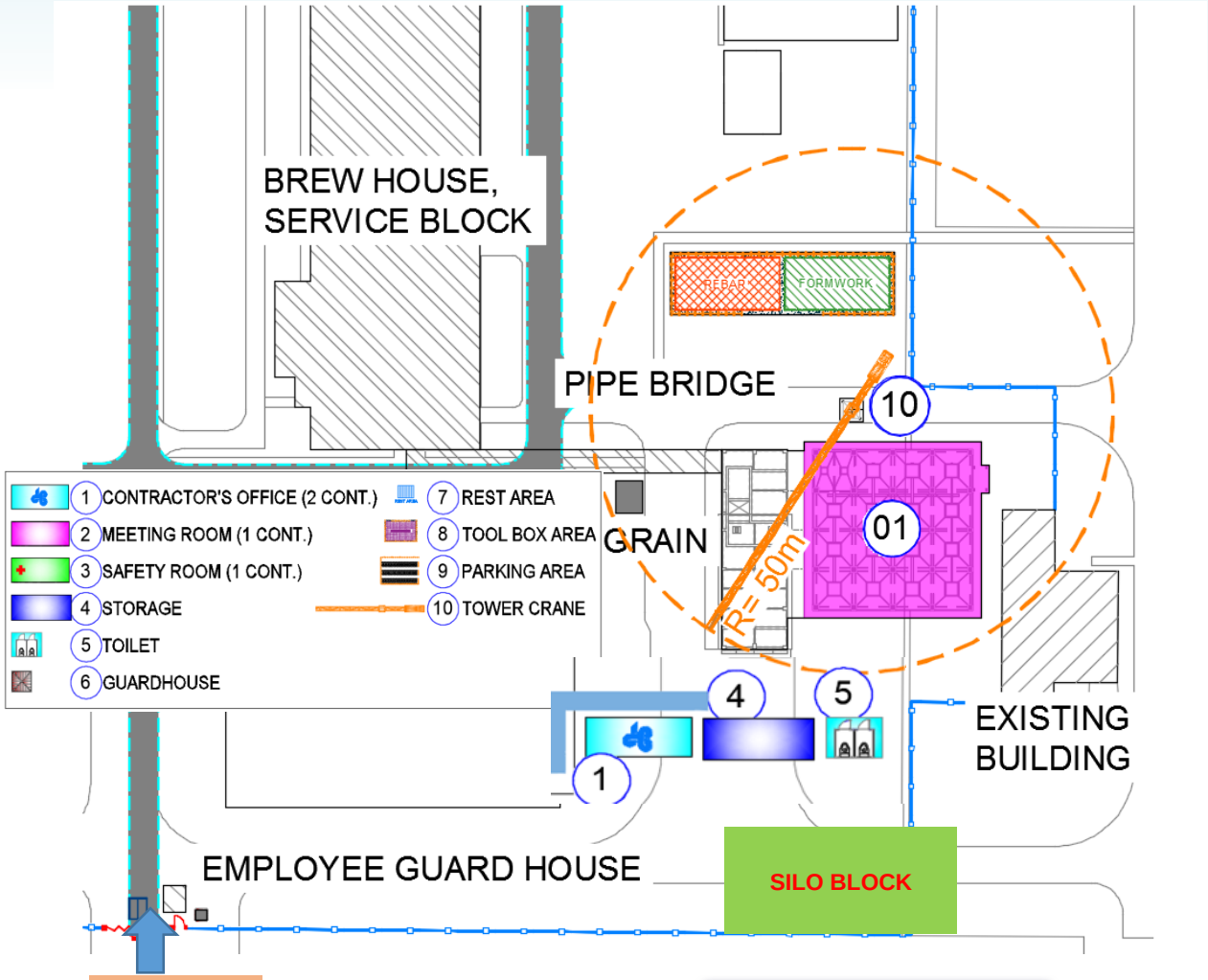
NOTES :

- E : GENERATOR
- : EXISTING MAIN DISTRIBUTION BOARD
- : SUB DISTRIBUTION BOARD
- : CÁP ĐIỆN + ỐNG BỌC CÁP

Temporary plan – 1

Logistic Plan

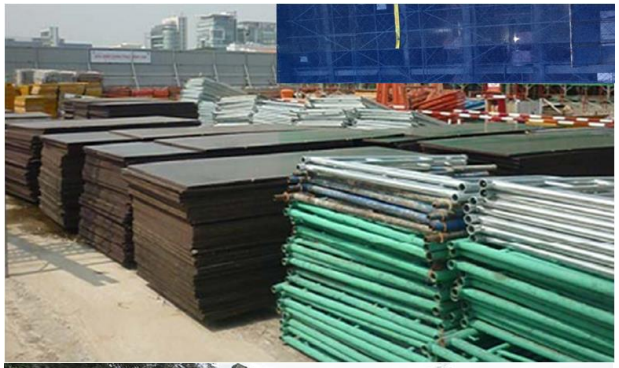
Logistic Plan



Temporary plan – 2

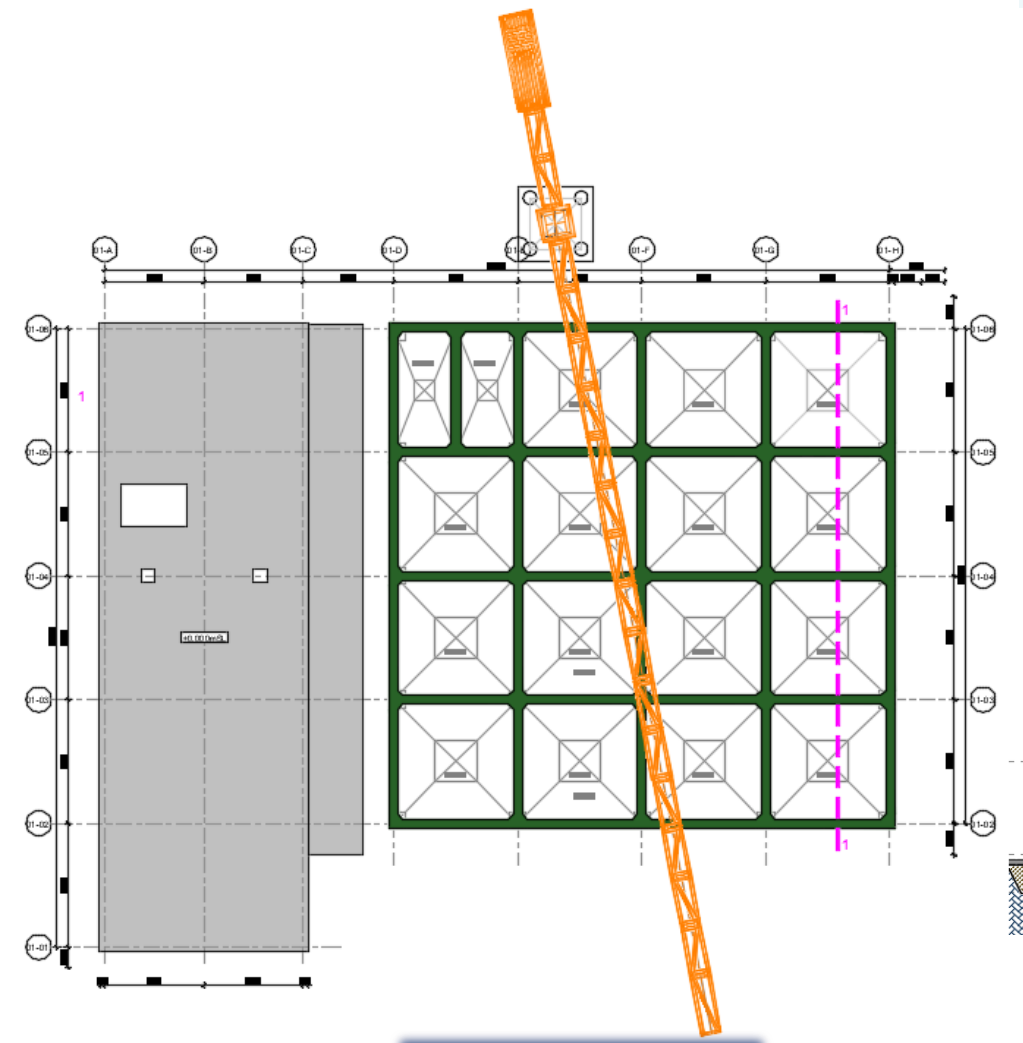
Hammer head Tower Cranes:
Using 01 hammerhead tower cranes

Capacity:
R50m – Max Load = 10T
Tip load =2T.

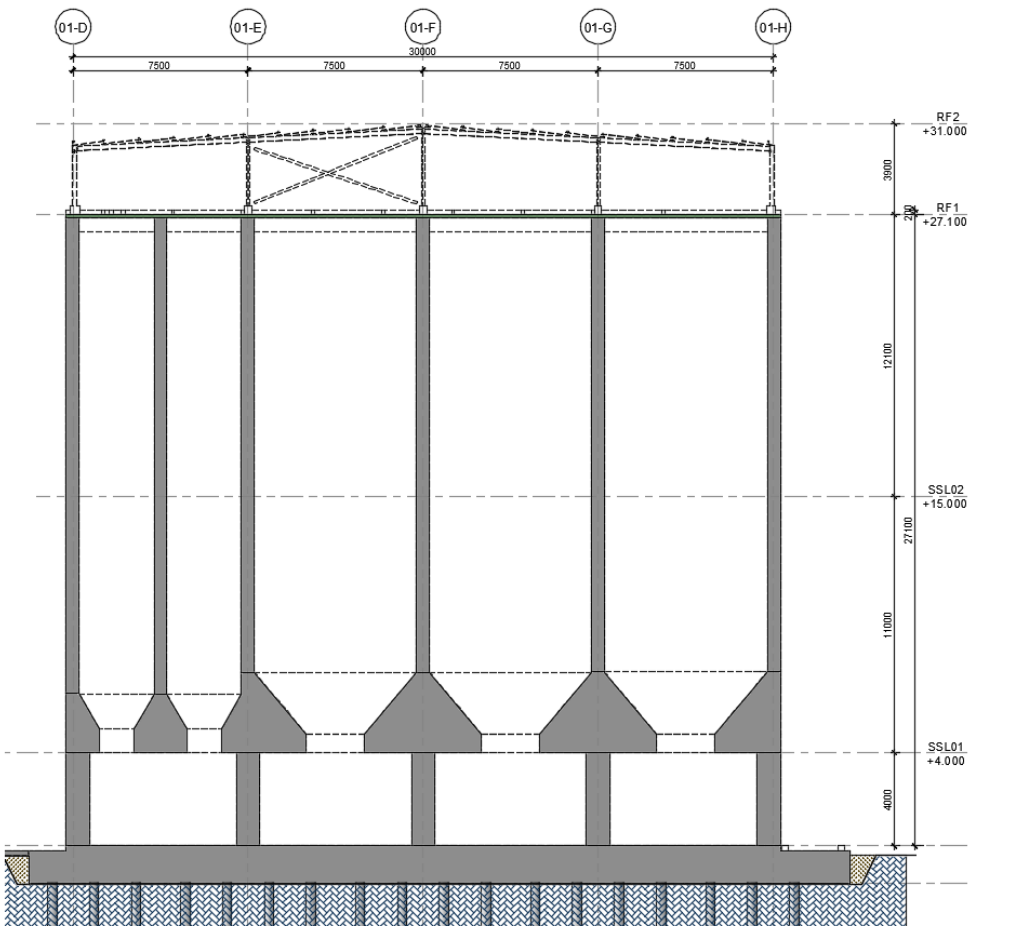


Construction Methodology

Construction plan of silo block



Construction plan



Section of silo block

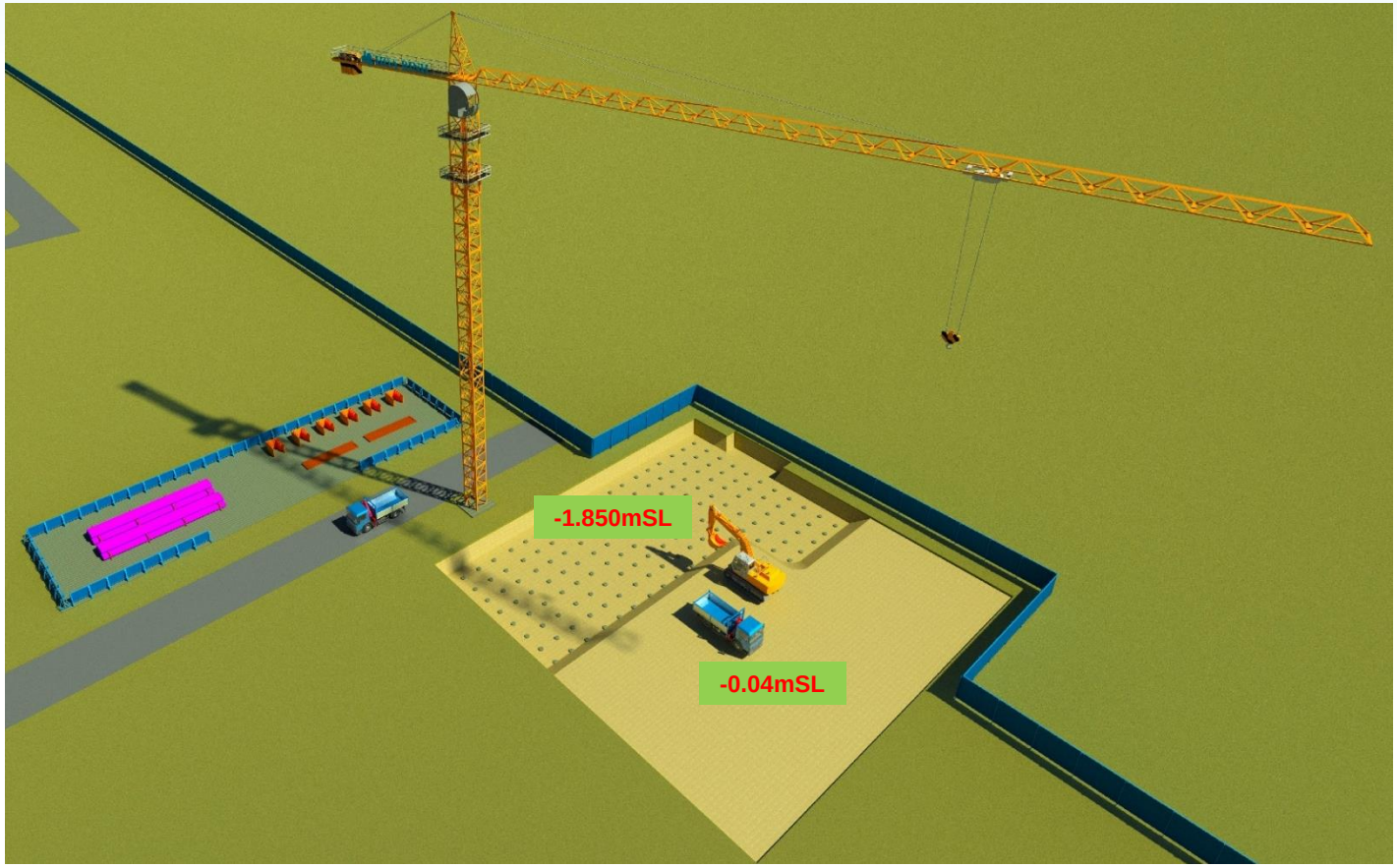
Construction Methodology

Sequence of Silo block Construction

Detail of Construction Sequences please refer to Tender Drawing

STEP 1

- Installation tower cranes
- Excavation: from ground level to bottom foundation (-1.85mSL)



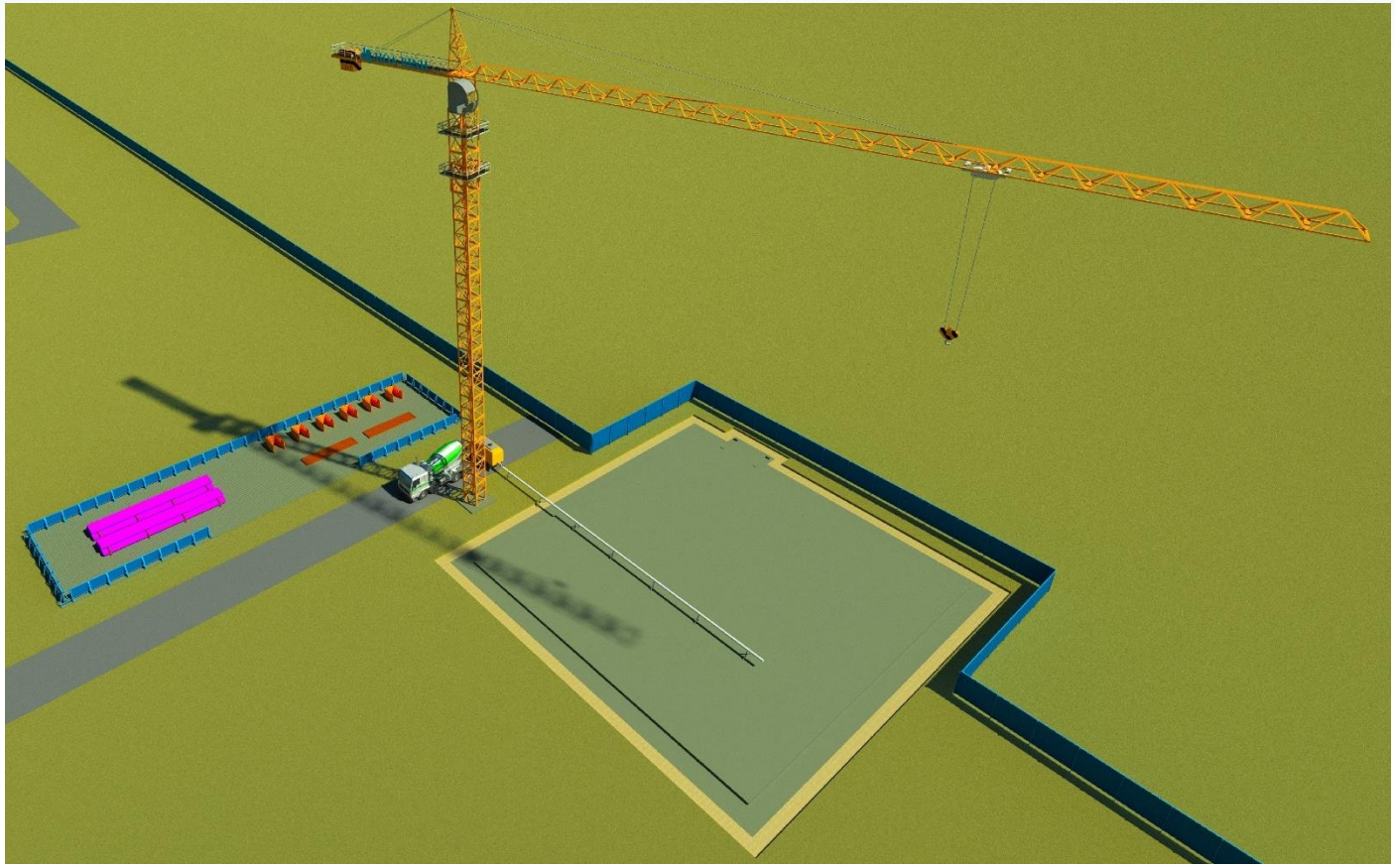
Construction Methodology

Sequence of Silo block Construction

Detail of Construction Sequences please refer to Tender Drawing

STEP 2

- Cutting pile head & compaction
- Reinforced concrete for foundation



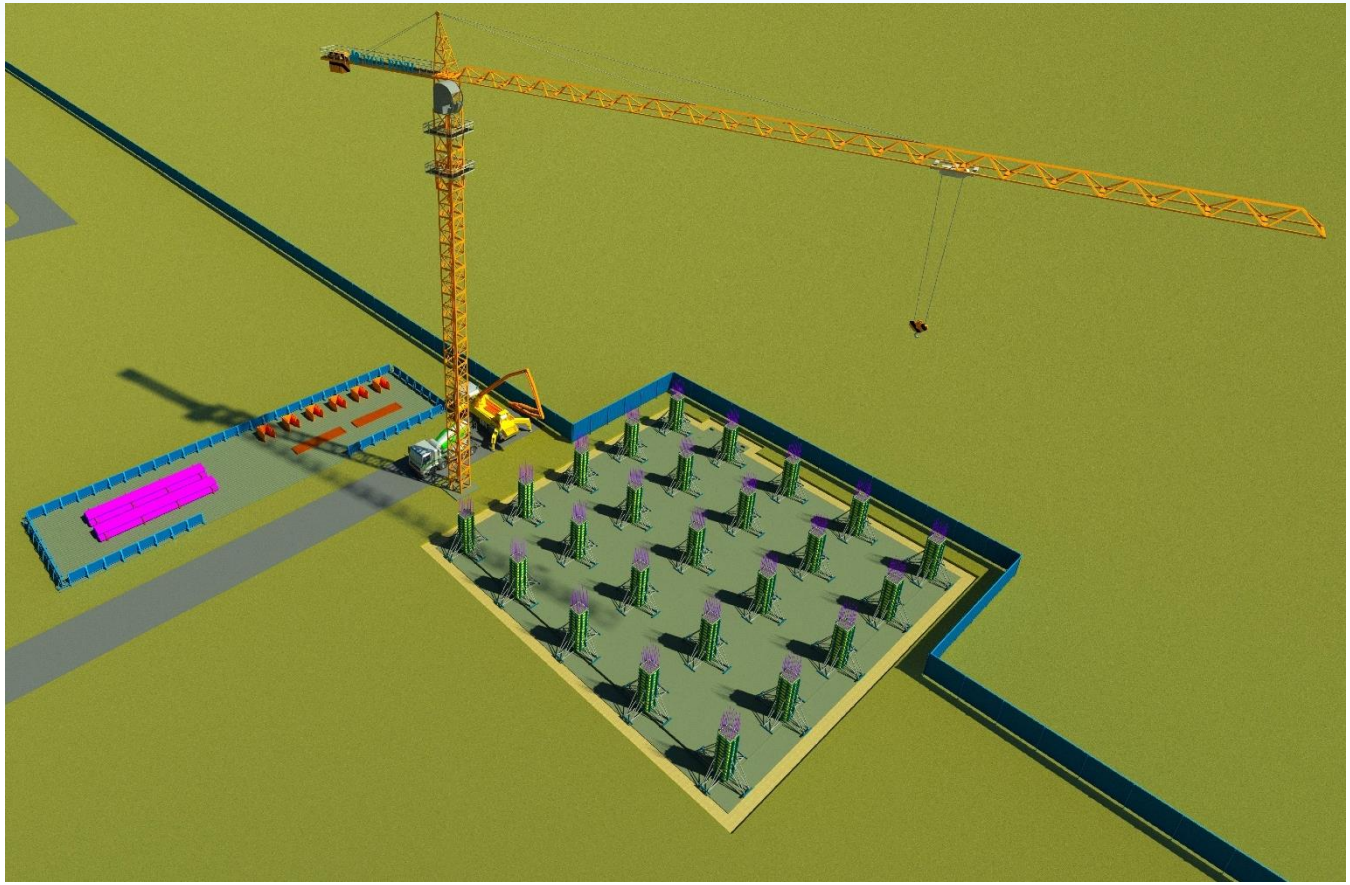
Construction Methodology

Sequence of Silo block Construction

Detail of Construction Sequences please refer to Tender Drawing

STEP 3

- Reinforced concrete for column from level SSL00 +0.00mSL to SSL01 +4.00mSL



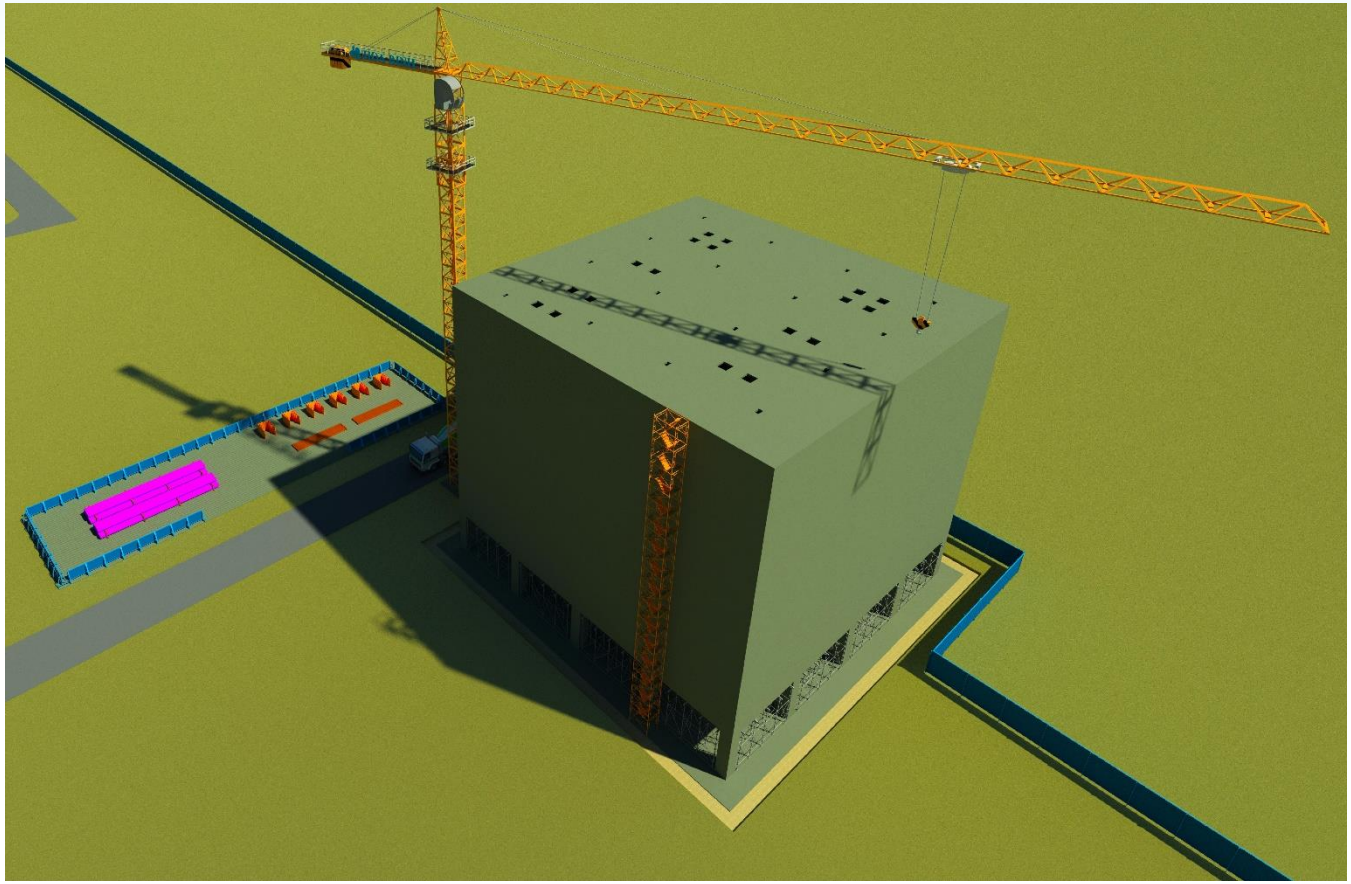
Construction Methodology

Sequence of Silo block Construction

Detail of Construction Sequences please refer to Tender Drawing

STEP 10

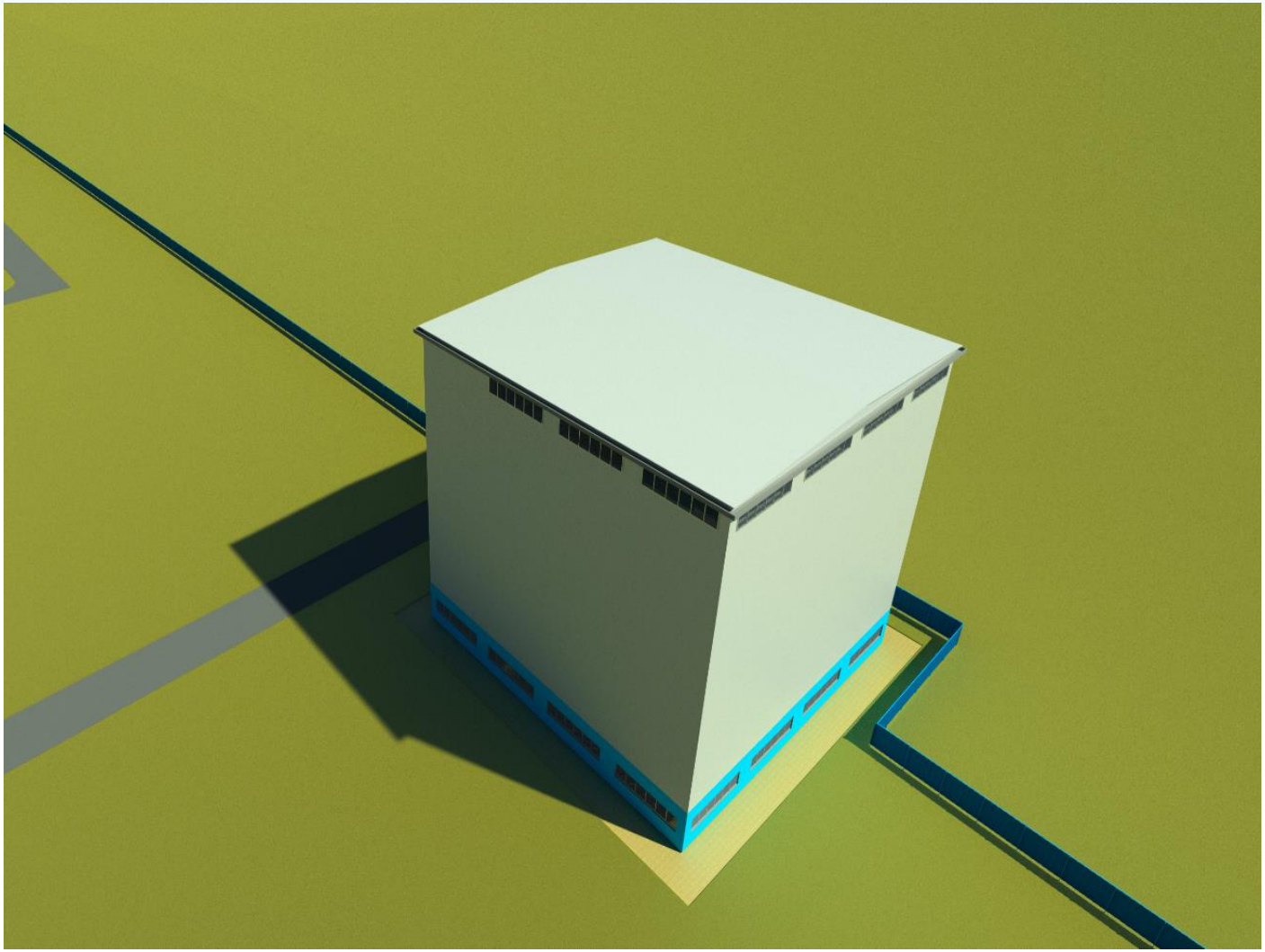
- Reinforced concrete for slab (thick 150mm) at 27.10mSL.



Construction Methodology

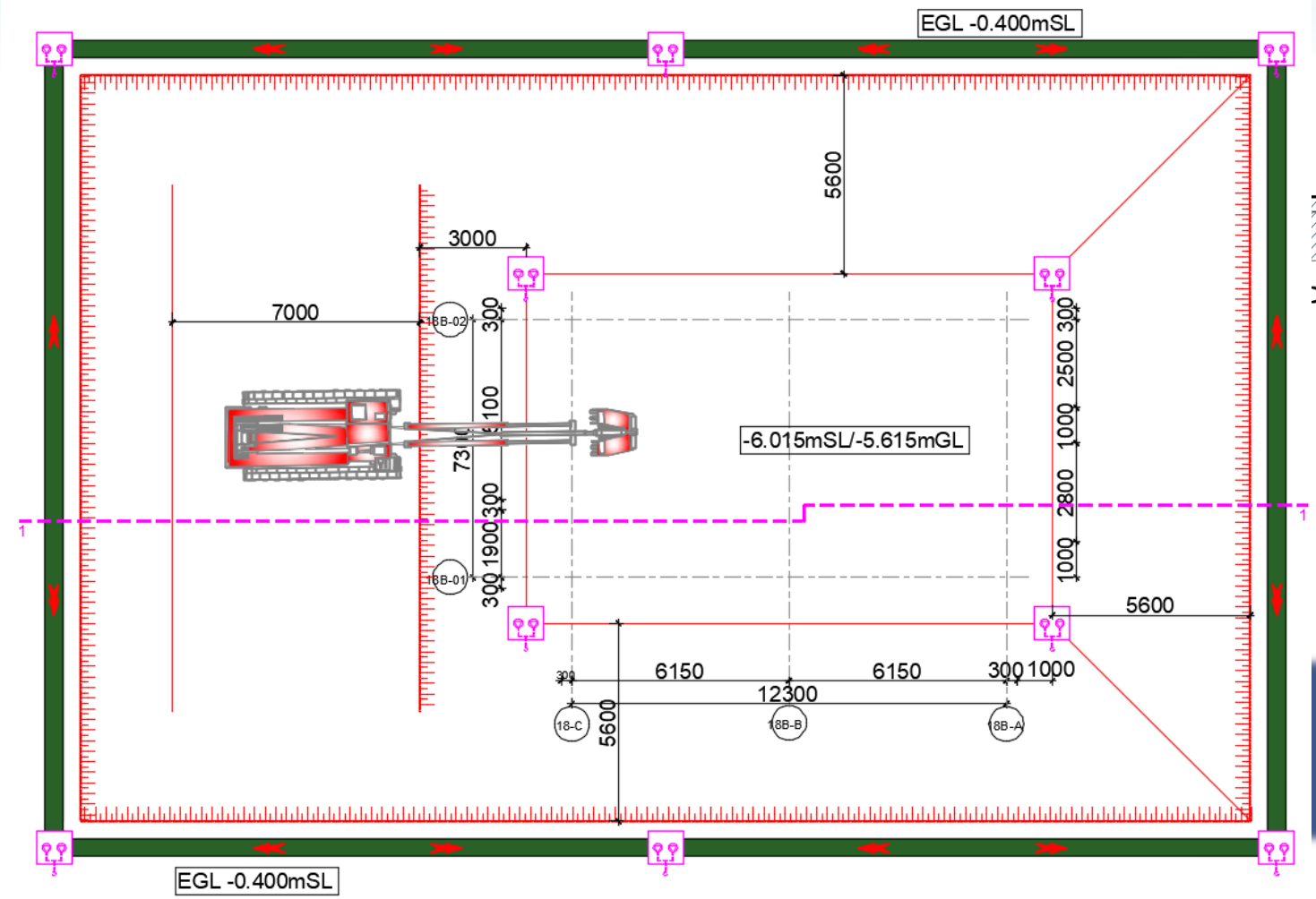
Sequence of Silo block Construction

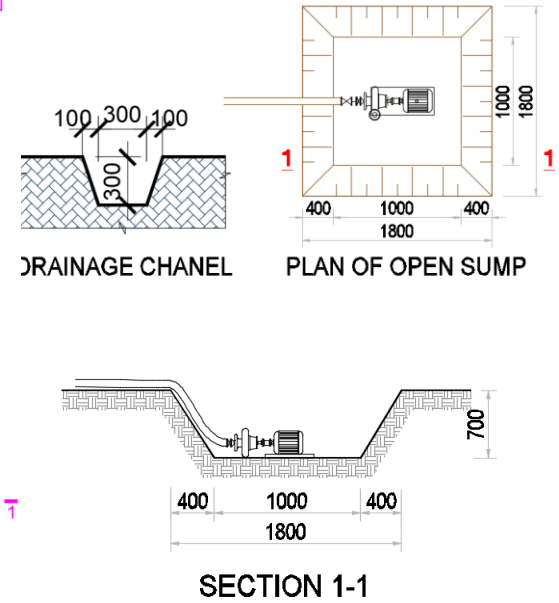
Detail of Construction Sequences please refer to Tender Drawing



Construction Methodology

Formwork Plan / Water tank

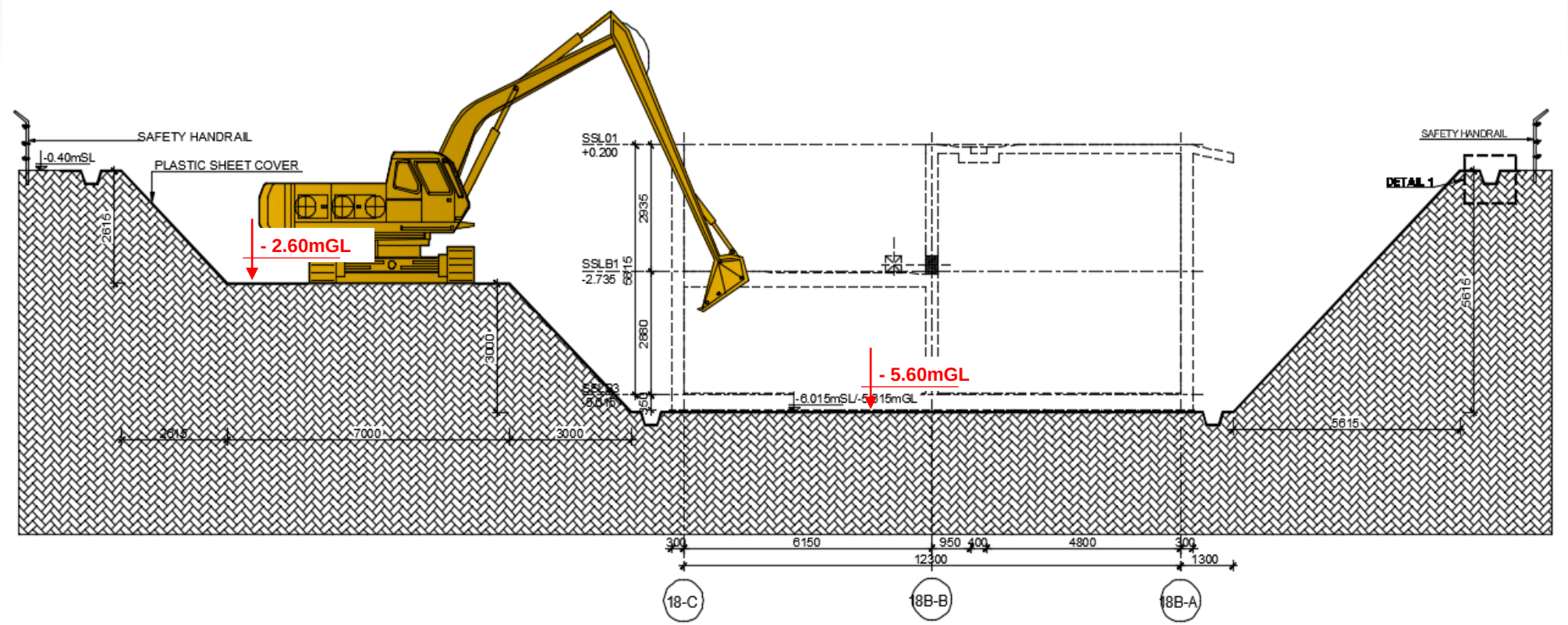




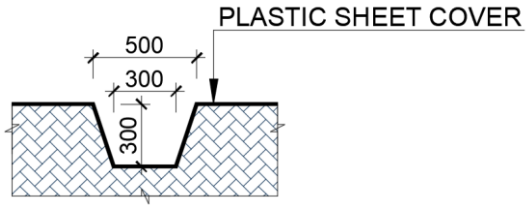
SOIL EXCAVATION PLAN FOR WASTE WATER TREATMENT (18B INFLUENT PUMP PIT)

Construction Methodology

Formwork Plan / Water tank



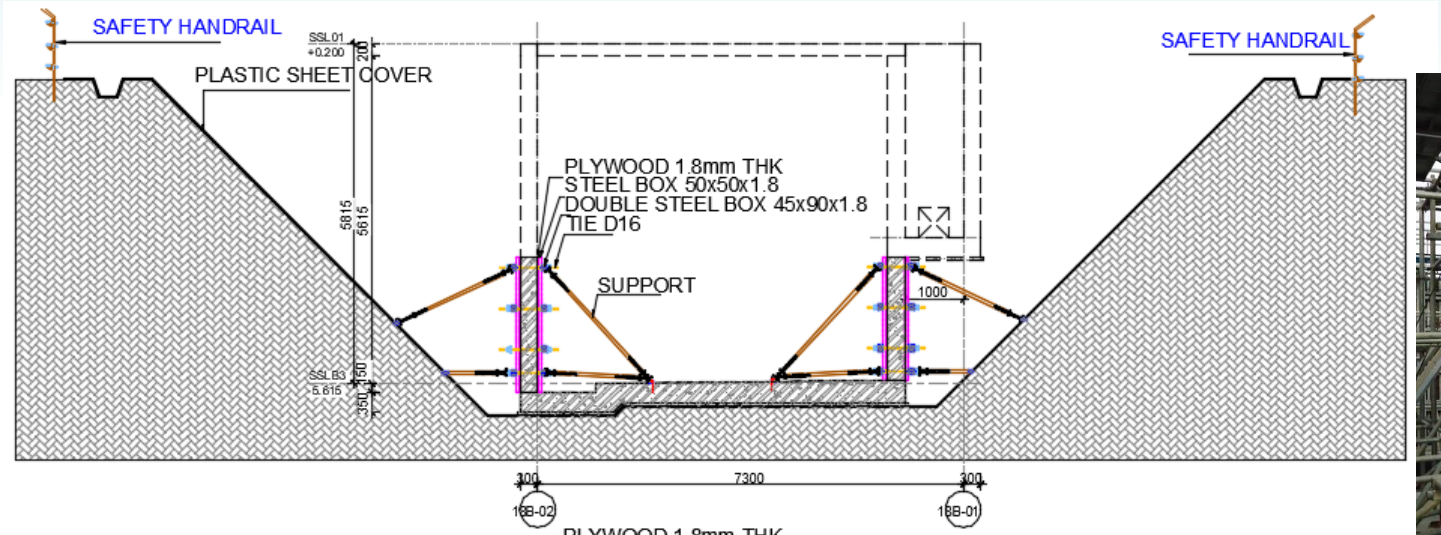
SOIL EXCAVATION SECTION FOR WASTE WATER TREATMENT.
(18B INFLUENT PUMP PIT)

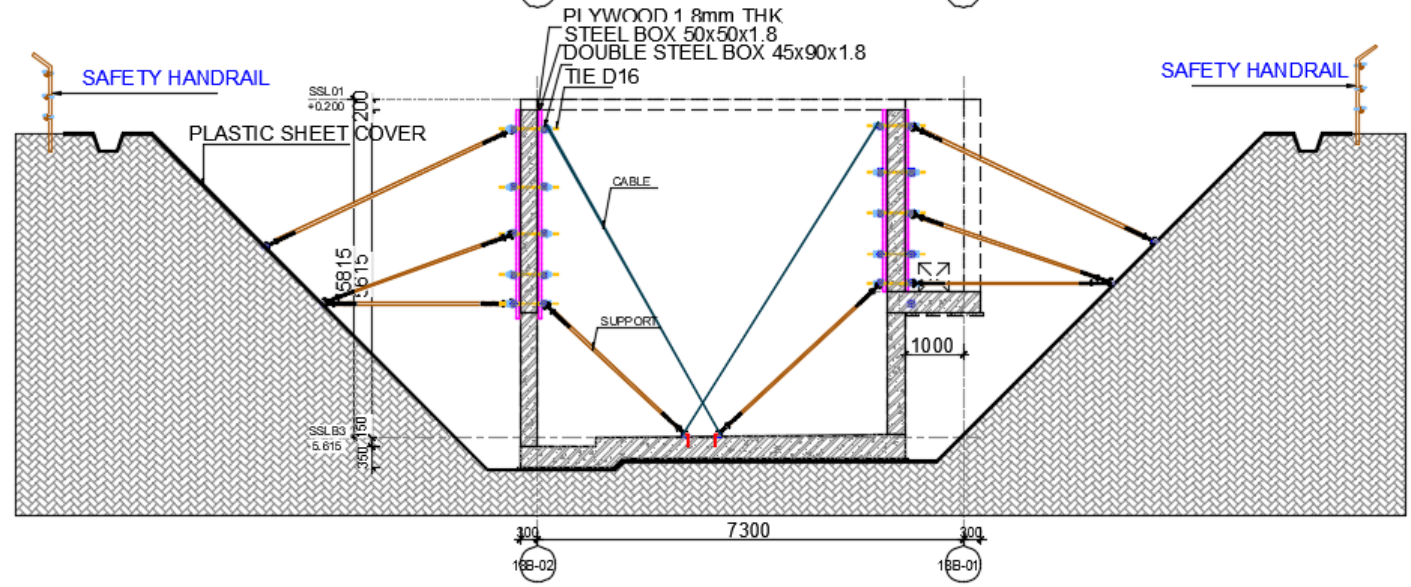


DETAIL 1

Construction Methodology

Formwork Plan / Water tank

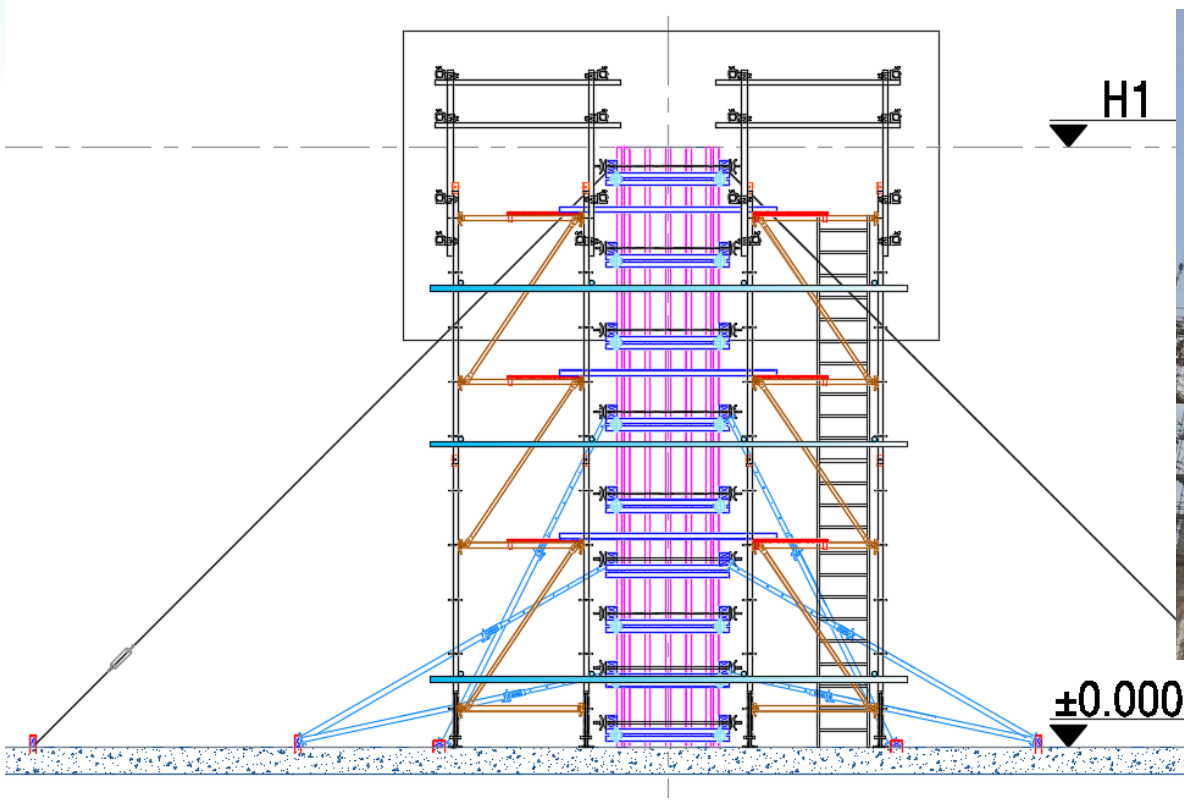




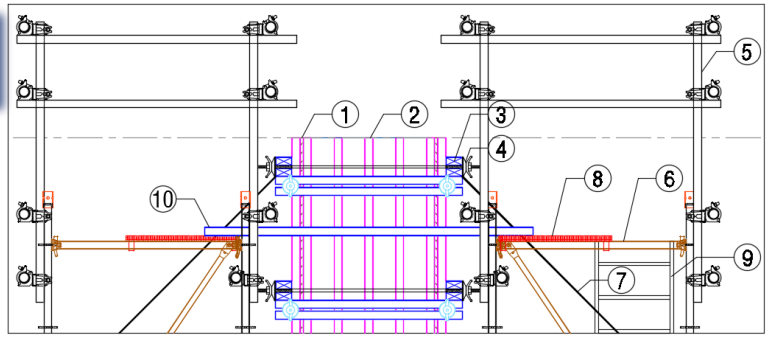
FORMWORK METHOD FOR WASTE WATER TREATMENT (18B - INFLUENT PUMP PIT)

Construction Methodology

Formwork Plan / Column



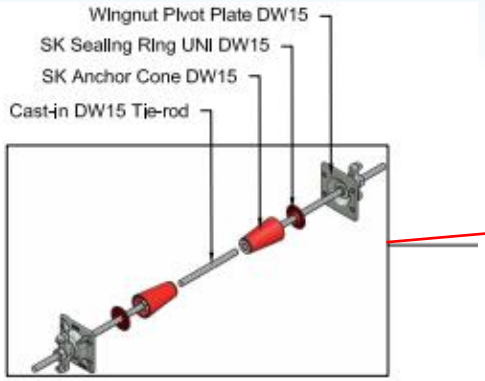
DETAIL OF COLUMN'S FORM



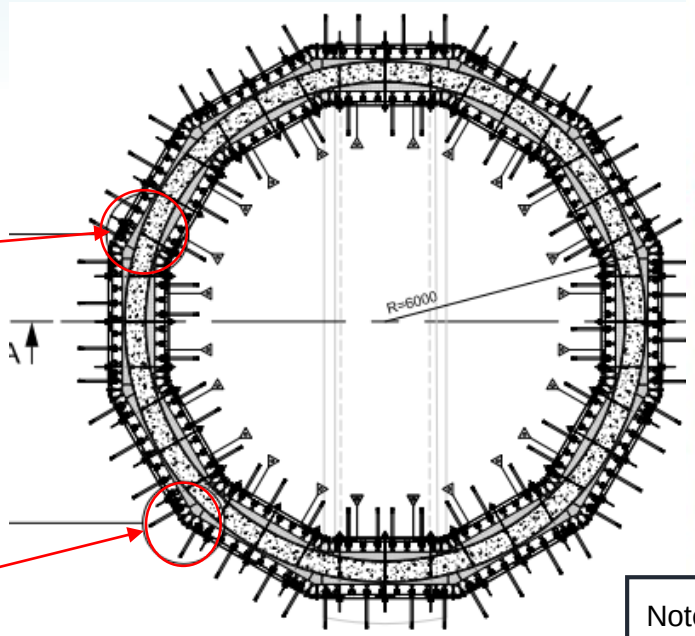
1. PLYWOOD 18mm
2. BOX STEEL 50x50x2
3. DOUBLE BOX STEEL 50x100x2
4. TIE D16
5. SAFETY HANDRAIL
6. FRAME SCAFFOLDING
7. CABLE
8. PLATFORM
9. STAIR
10. DOUBLE BOX STEEL 50x100x2

Construction Methodology

Formwork Plan / formwork for wall WWTP



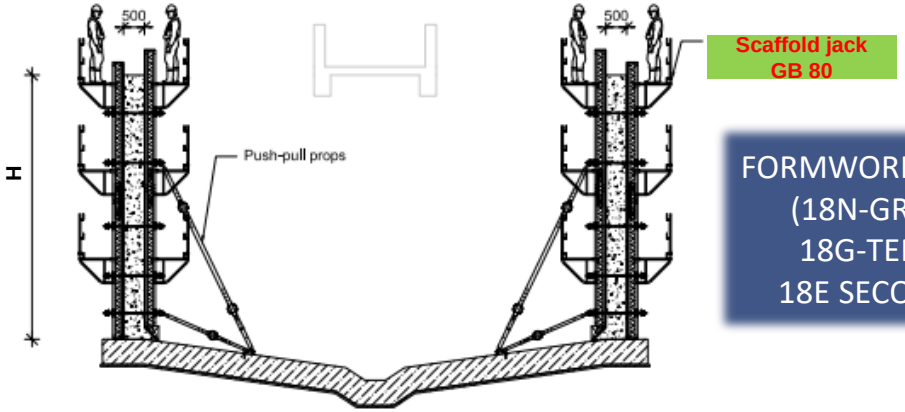
SK Cone Wall Ties - Water Proof Tie.



GRAVITY THICKENER LAYOUT PLAN
SCALE: 1/100

Vario Coupling VKZ is used connection of SRZ or SRU steel walers.

Note:
- LENGTH OF CONCRETING BLOCK <20 m

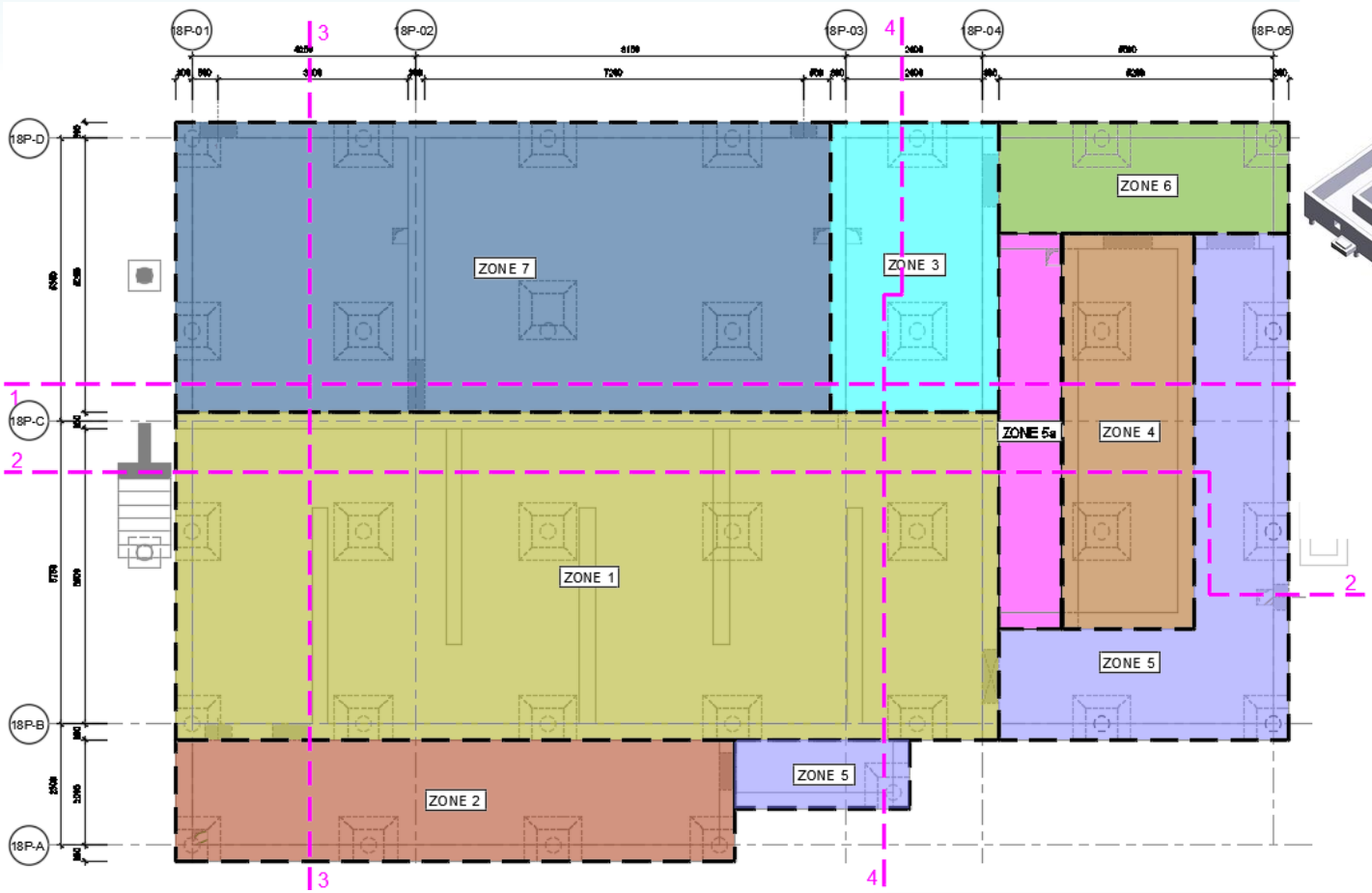


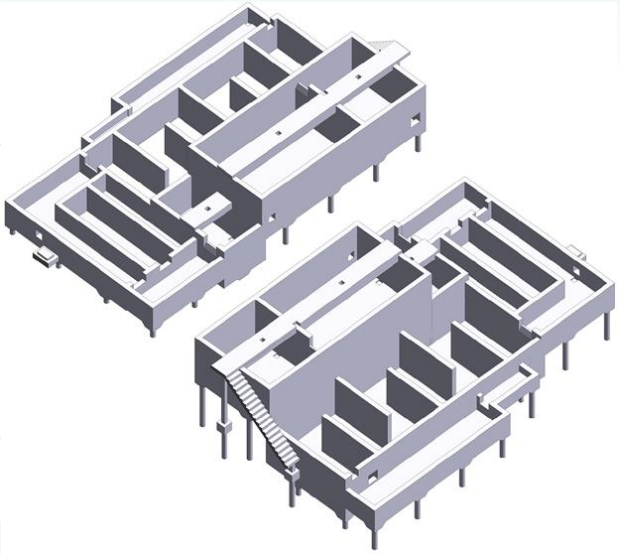
SECTION A-A
SCALE: 1/100

FORMWORK METHOD FOR WALL
(18N-GRAVITY THICKENER
18G-TERTIARY CLARIFIER
18E SECONDARY CLARIFIER)

Construction Methodology

Formwork Plan / concrete for wall WWTP

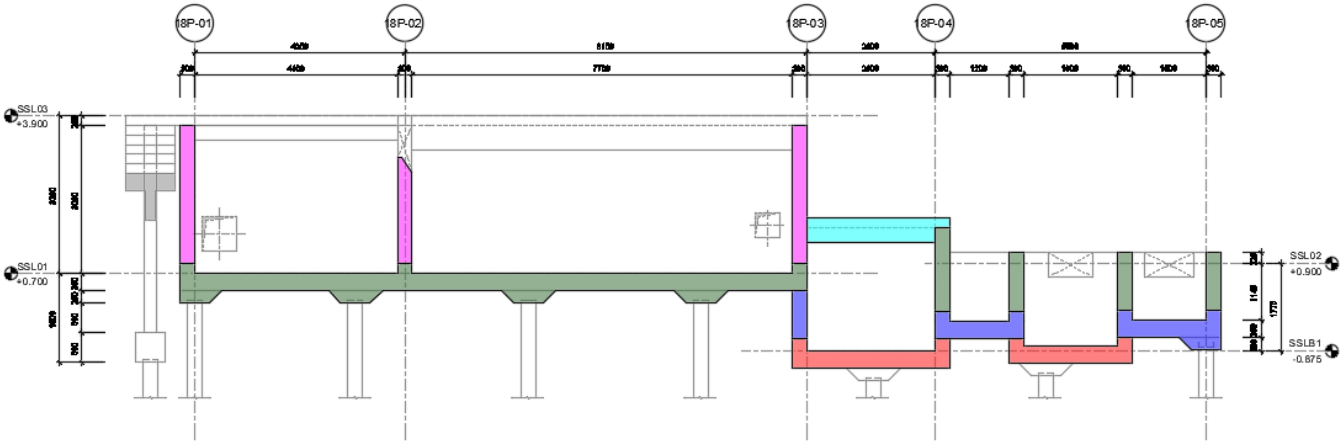




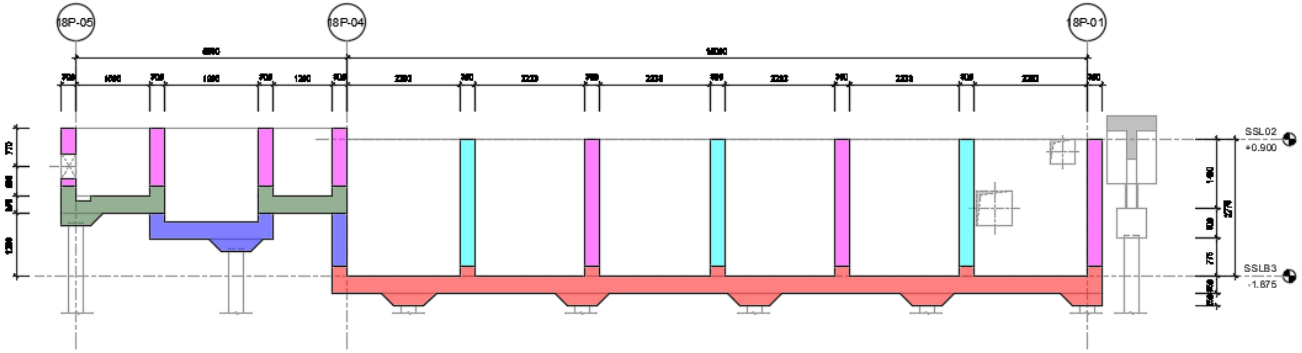
18-P: RAPID FLOCCULATION
NEUTRALIZATION DISINFECTION
DISC FILTER CHANNEL

Construction Methodology

Formwork Plan / concrete for wall WWTP



SECTION 1-1



SECTION 2-2

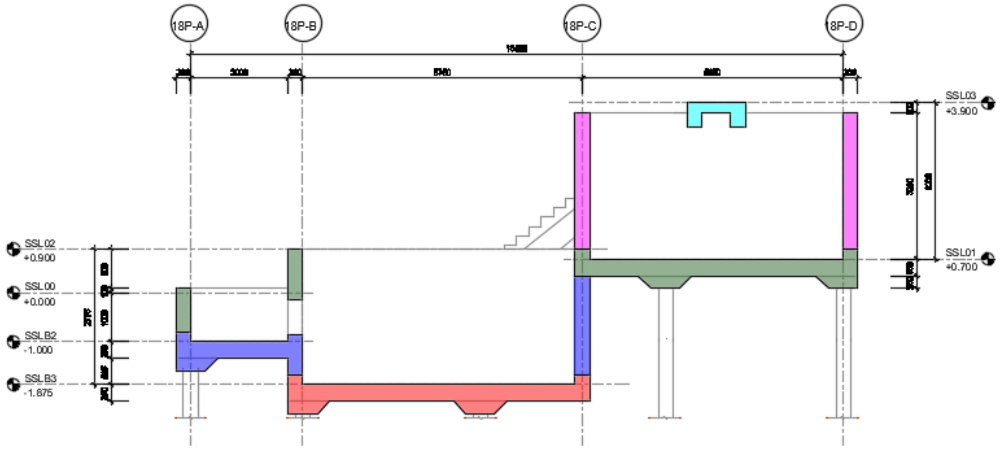
NOTES:

- STEP 1
- STEP 2
- STEP 3
- STEP 4
- STEP 5

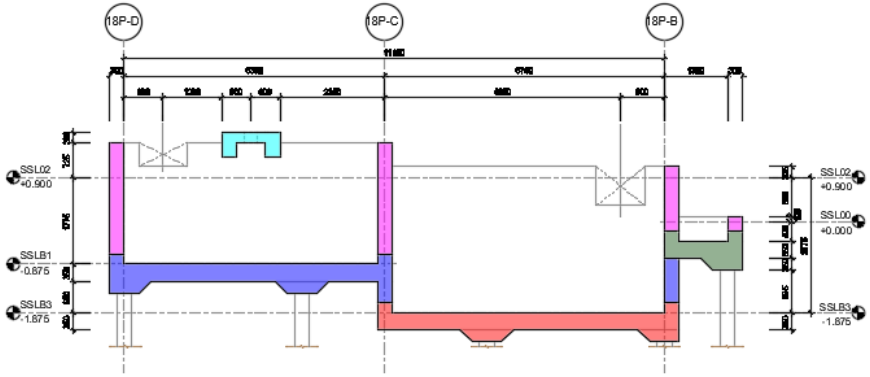
18-P: RAPID FLOCCULATION
NEUTRALIZATION DISINFECTION
DISC FILTER CHANNEL

Construction Methodology

Formwork Plan / concrete for wall WWTP



SECTION 3-3



SECTION 4-4

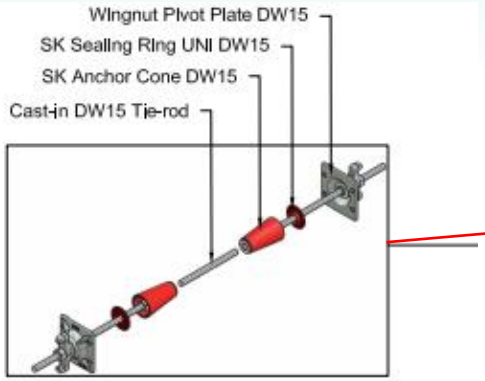
NOTES:

- STEP 1
- STEP 2
- STEP 3
- STEP 4
- STEP 5

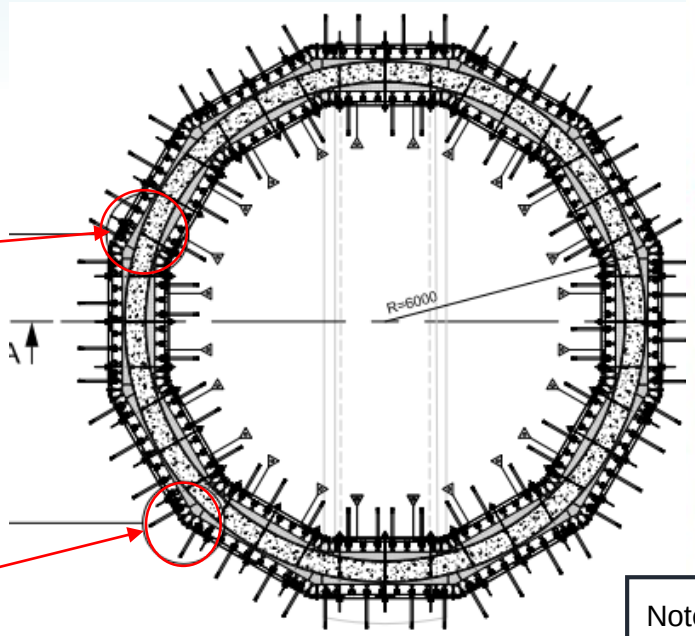
18-P: RAPID FLOCCULATION
NEUTRALIZATION DISINFECTION
DISC FILTER CHANNEL

Construction Methodology

Formwork Plan / formwork for wall WWTP



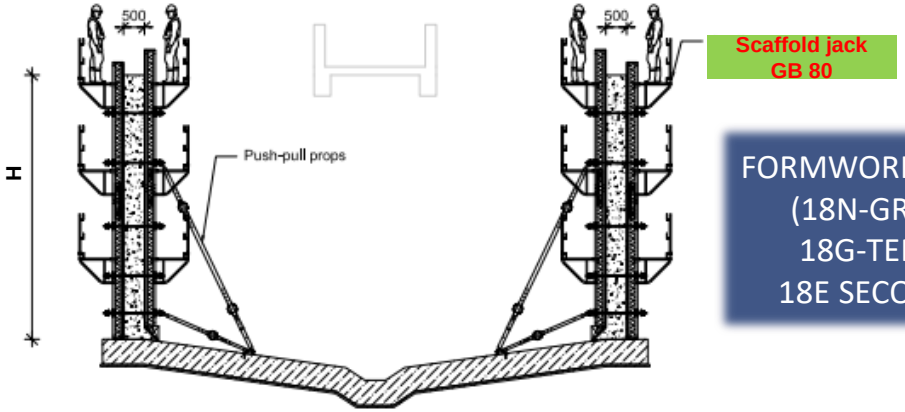
SK Cone Wall Ties - Water Proof Tie.



GRAVITY THICKENER LAYOUT PLAN
SCALE: 1/100

Vario Coupling VKZ is used connection of SRZ or SRU steel walers.

Note:
- LENGTH OF CONCRETING BLOCK <20 m

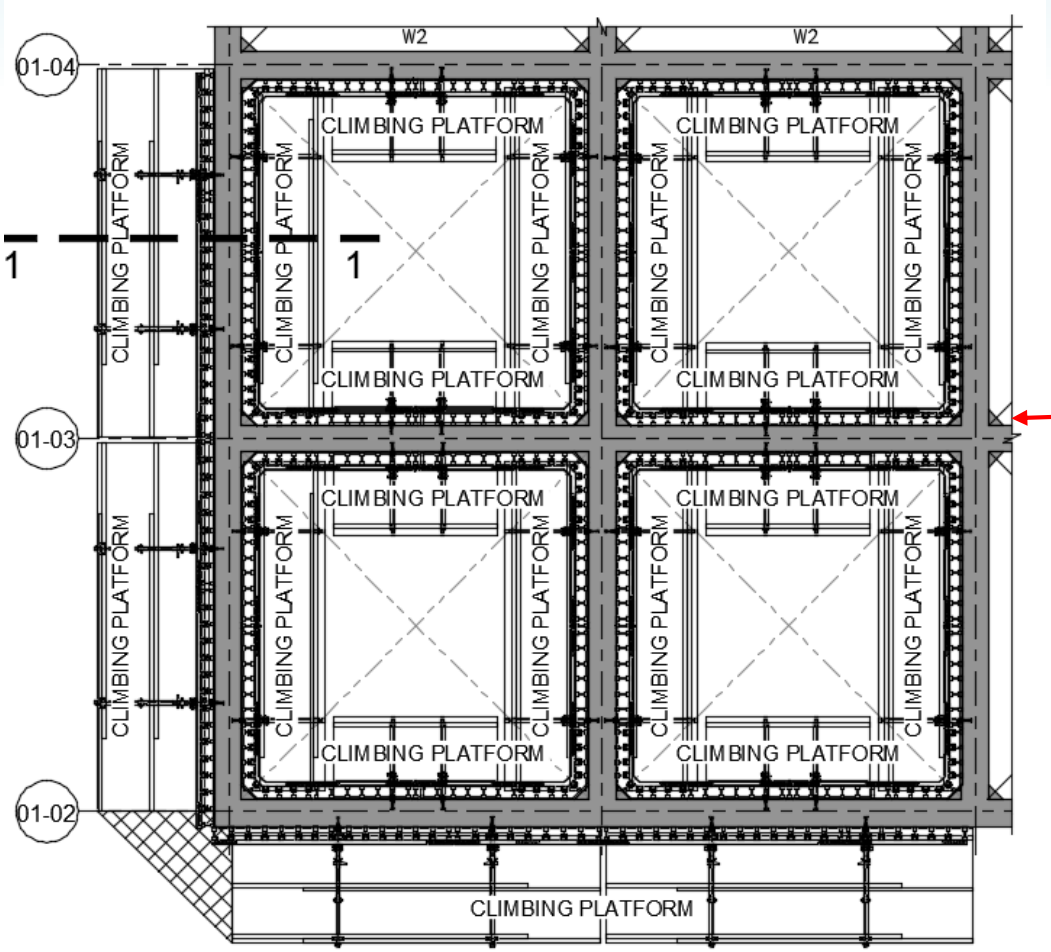


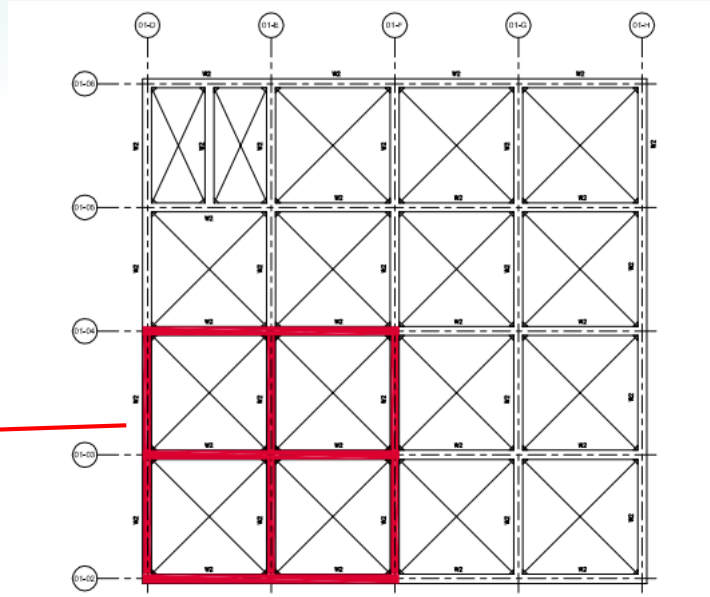
SECTION A-A
SCALE: 1/100

FORMWORK METHOD FOR WALL
(18N-GRAVITY THICKENER
18G-TERTIARY CLARIFIER
18E SECONDARY CLARIFIER)

Construction Methodology

Formwork Plan / Silo block





TYPICAL FORMWORK PLAN FOR SILO BLOCK

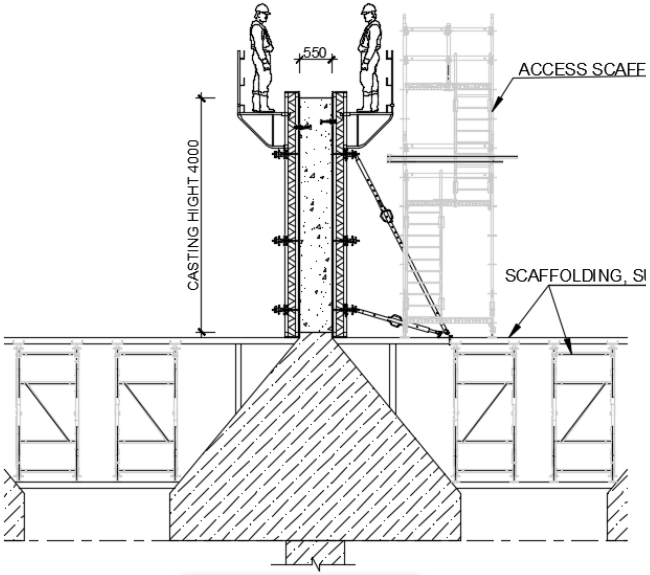
- NOTES: A special formwork system shall be used to ensure and achieved a fair faced concrete finish

Construction Methodology

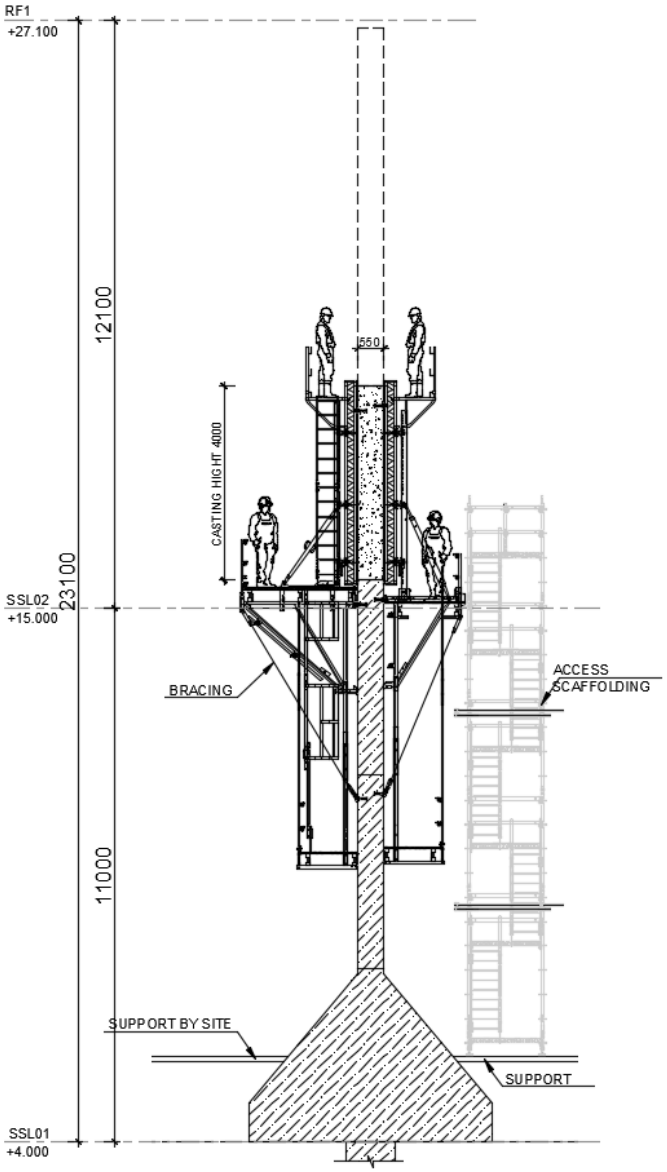
Formwork Plan / Silo block

- NOTE:
- Max weight of formwork panel = 1,8T
- Max weight of climbing platform = 1,5T
- Climbing Platform are designed for working wink speed of 72 km/h and maximum wink speed of 145km equivalent to wind pressure of 1.0 KN/m2
- In the event that wind speed exceeds 72km/h, all work activities must stop. In case maximum wind Speed of 145km/h is exceeded. All climbing platforms must be tied to existing structure by site

- NOTES: A special formwork system shall be used to ensure and achieved a fair faced concrete finish



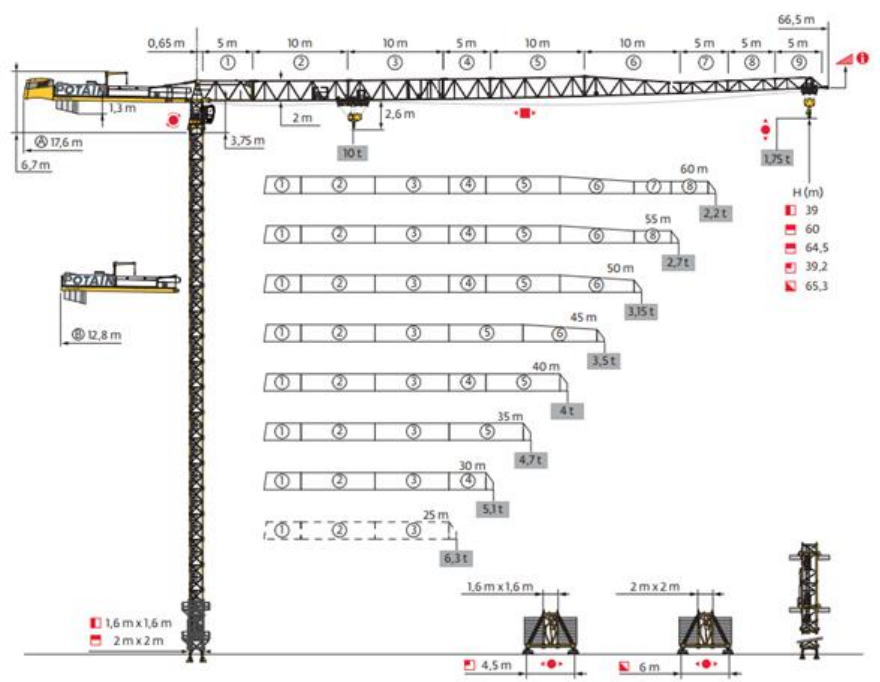
FIRST CAST

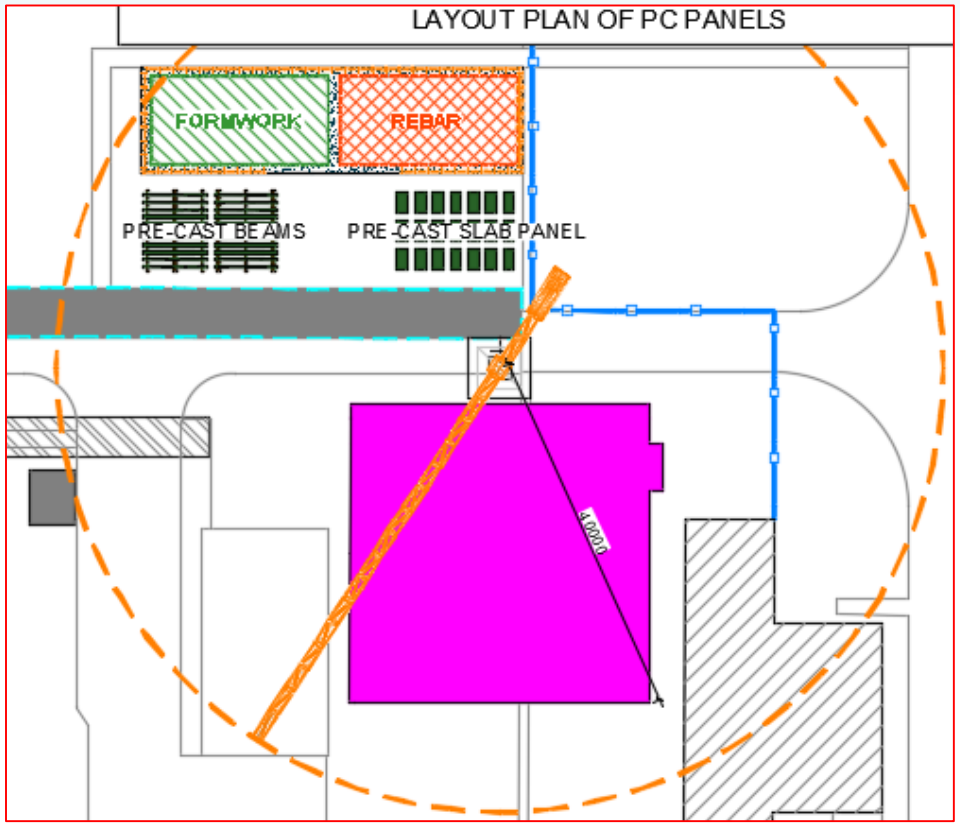


TYPICAL CAST WITH CB CLIMBING PLATFORM

Construction Methodology

Formwork Plan / Silo block



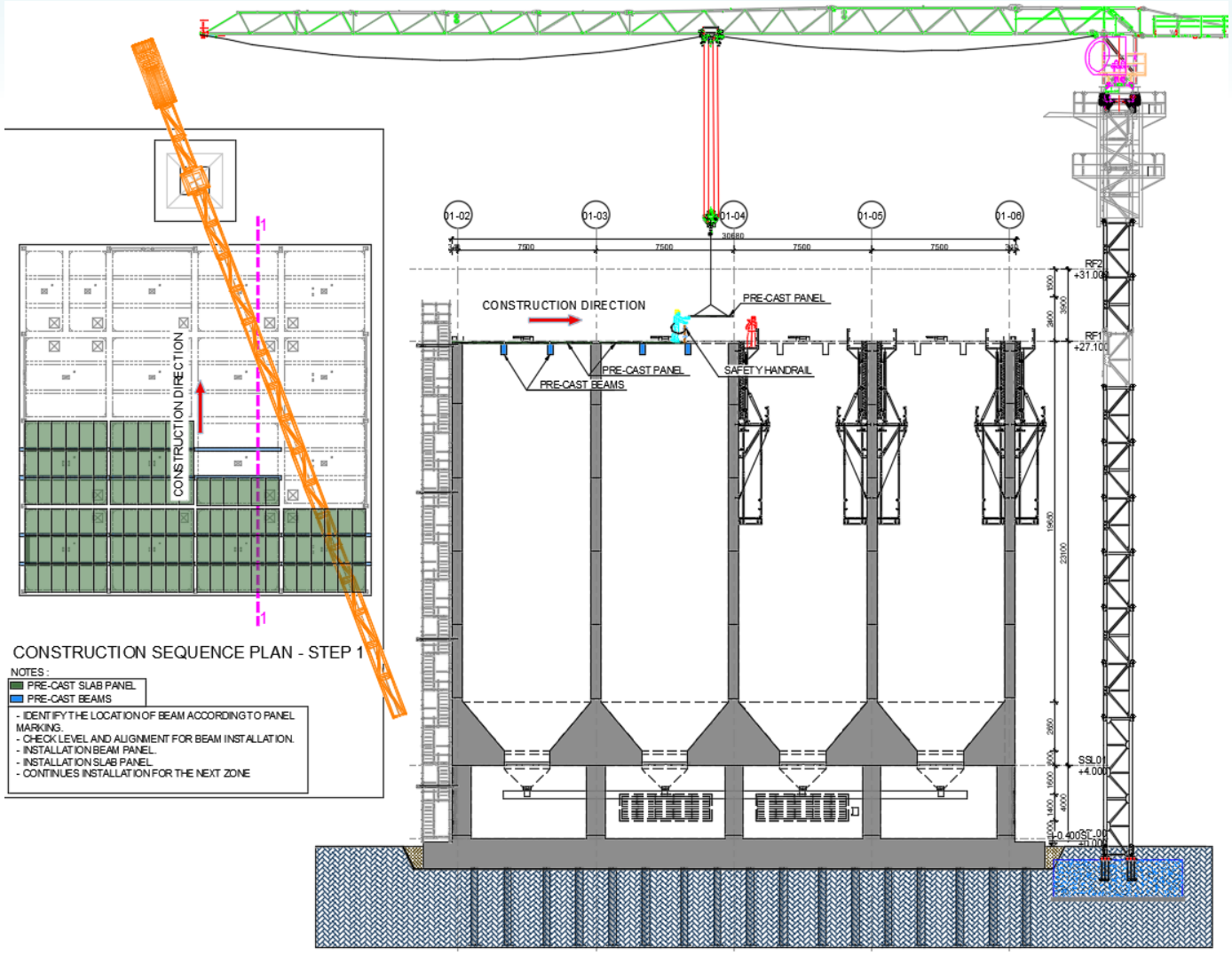


PC Element	Crane's maximum working radius (m)	Max PC Load (T)	Crane capacity (T)	Safety Ratio	Conclusion
Beam	40	3.24	4.1	1.265	OK
Panel	40	0.576	4.1	7.118	OK

METHOD FOR SLAB - RF1
(01 MALT STORAGE BUILDING)

Construction Methodology

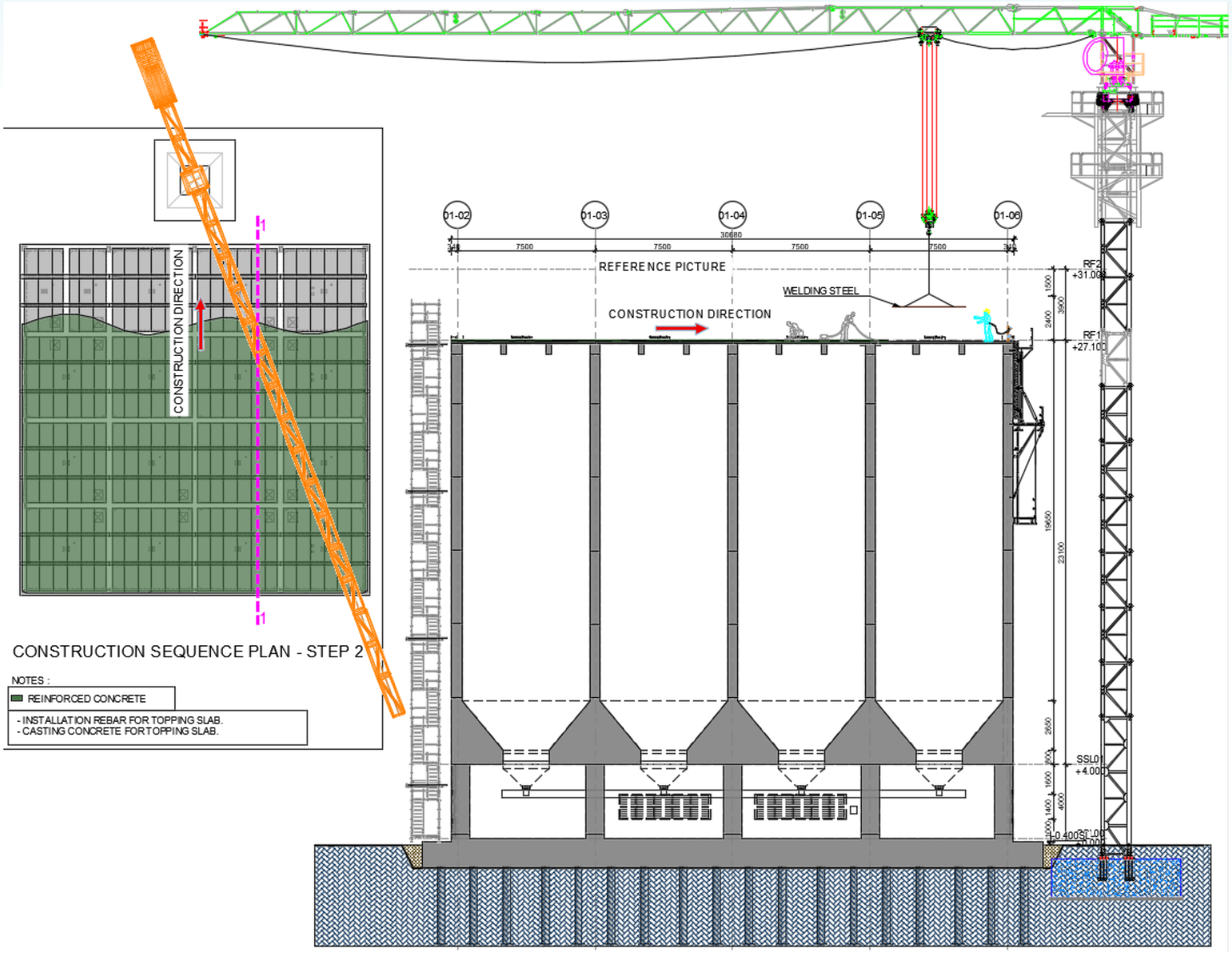
Formwork Plan / Silo block



SECTION 1-1
CONSTRUCTION SEQUENCE SECTION - STEP 1

Construction Methodology

Formwork Plan / Silo block



Construction Methodology

Formwork Plan / Silo block

Construction Methodology

Formwork Plan / Silo block

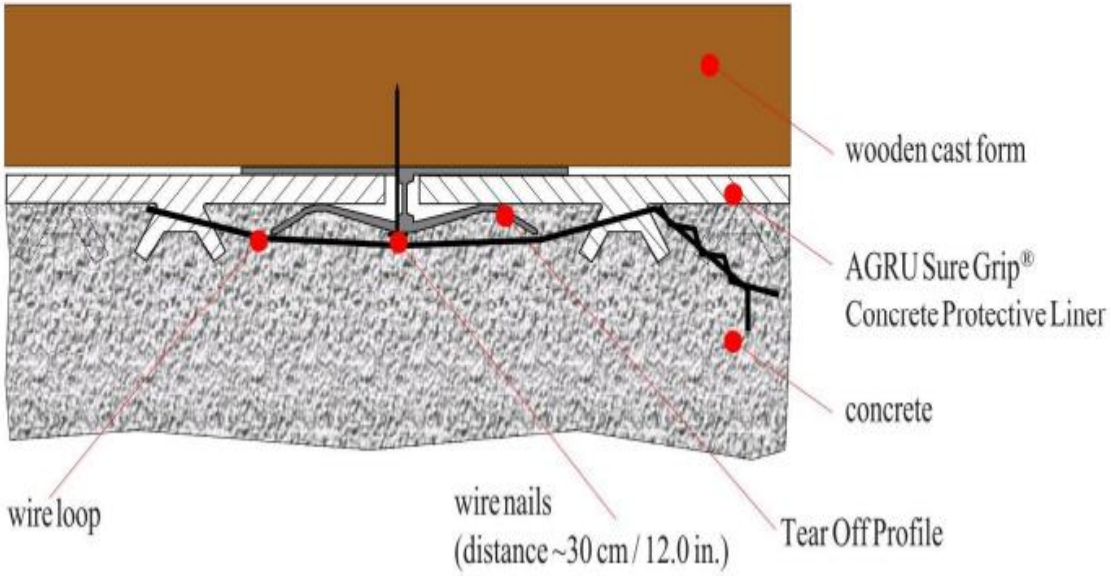
Construction Methodology

Method Statement for HDPE Liners for WWTP

Wall – Installation

- 2.5mm – 5.0mm (with profiles)
- 6.0mm – 12.0mm (without profiles)

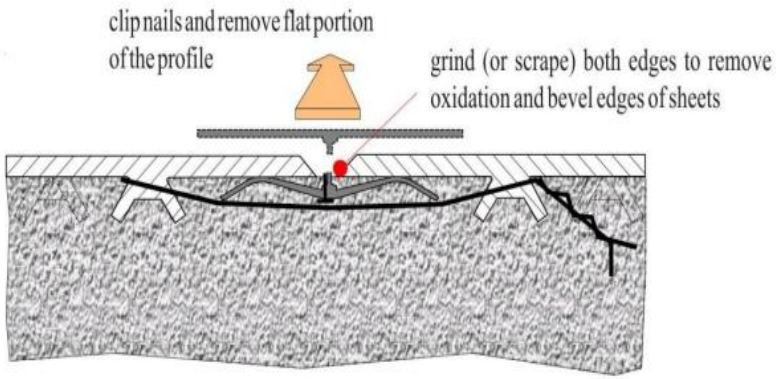
- Tear off profile for joining liners ≤5mm thick



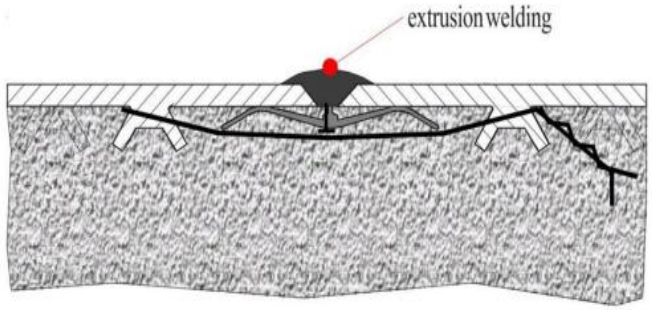
Construction Methodology

Method Statement for HDPE Liners for WWTP

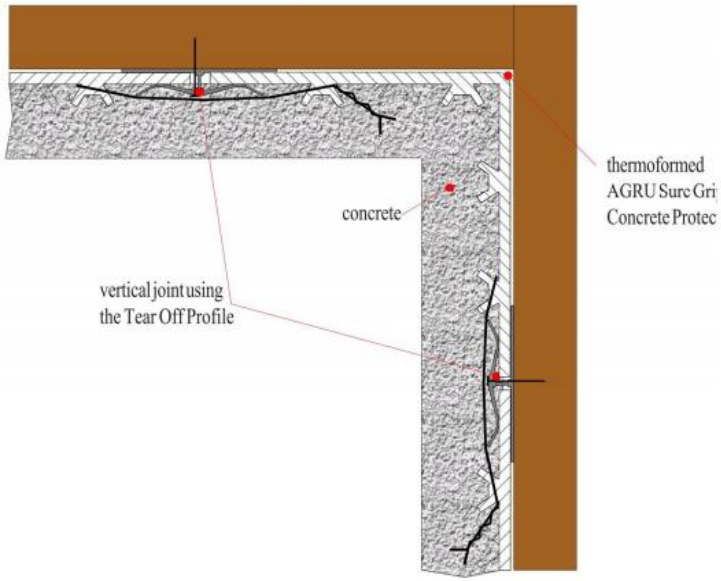
- Tear off profile joint – prior to welding

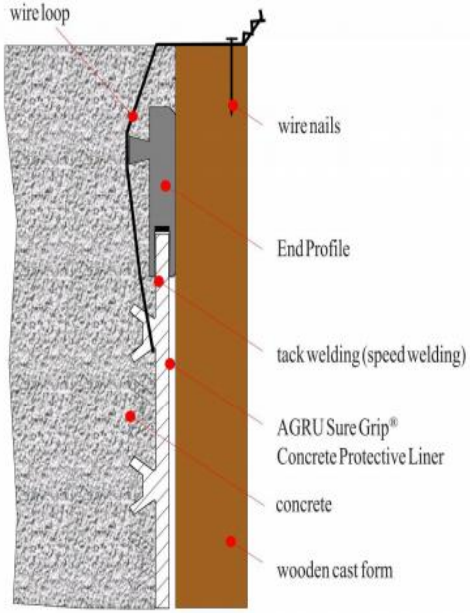


- Tear off profile joint – execution of extrusion welding seam



- Thermoformed corners – Outside



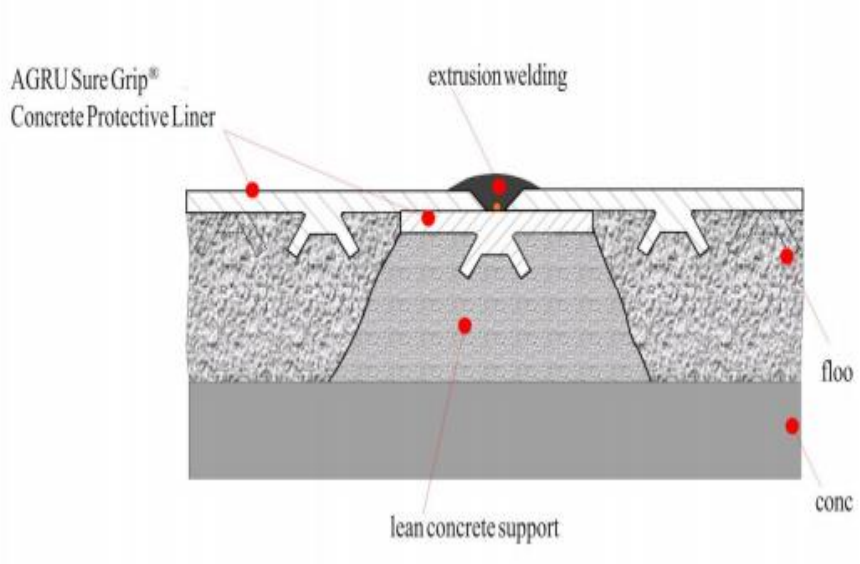


Construction Methodology

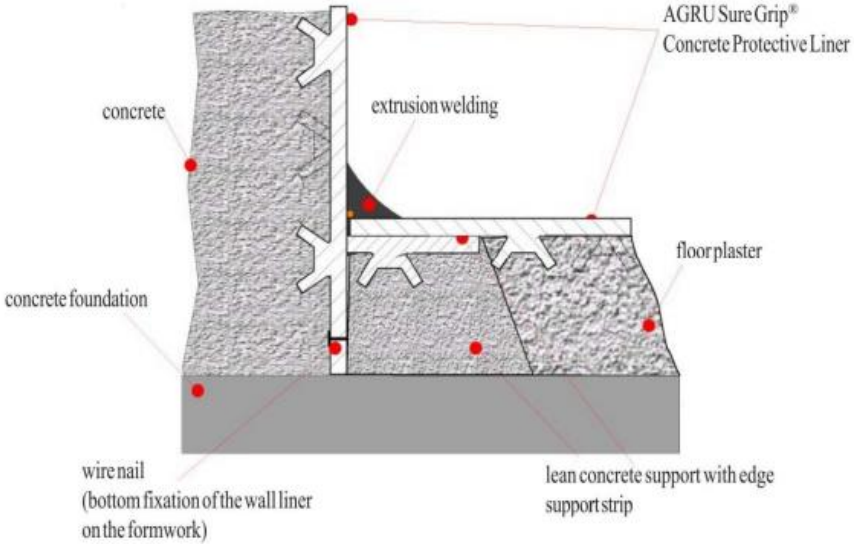
Method Statement for HDPE Liners for WWTP

Floor lining with AGRU Concrete Protective Liner

- 3.0 – 12.0mm
- Floor lining using lean concrete supports



- Floor lining using lean concrete supports – wall/ floor transiton

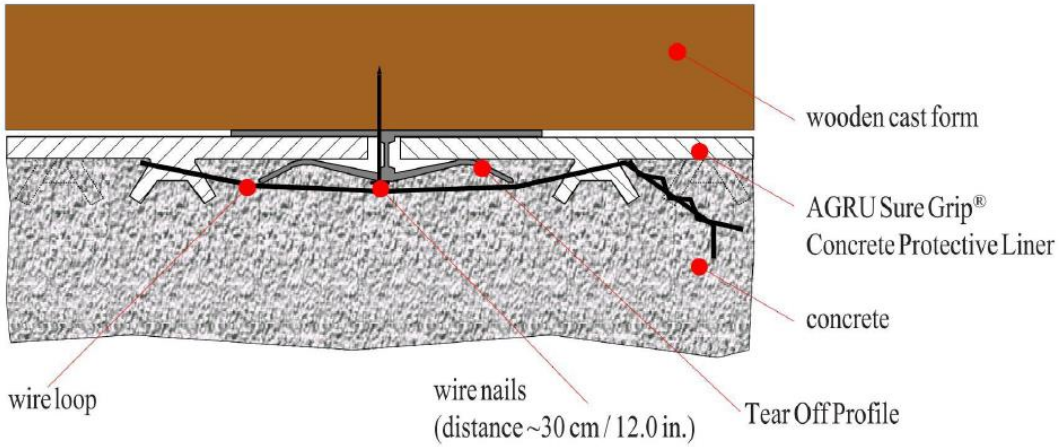


Construction Methodology

Method Statement for HDPE Liners for WWTP

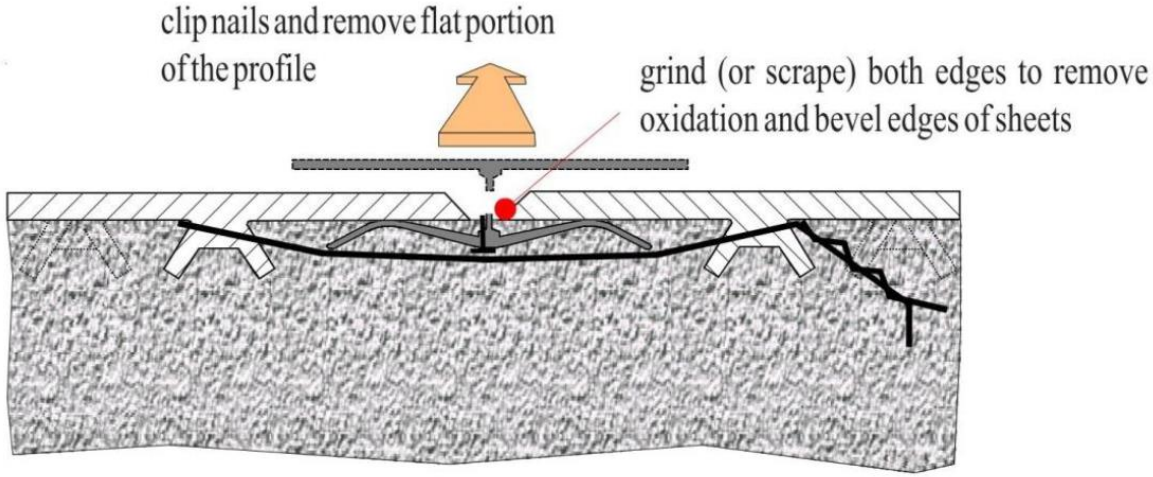
STEP 1

- Fixing the HDPE sheet to formwork by the wire nails & loop (distance ~ 30cm).
- Using tear off profile for join.
- Casting concrete for walls.



STEP 2

- Remove formwork
- Remove clip nails and flat portion of tear off profile

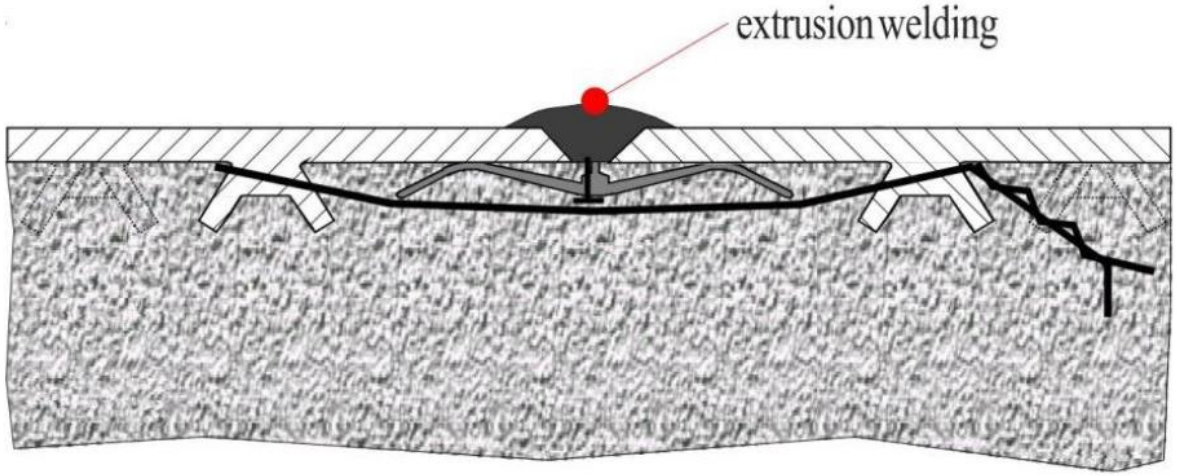


Construction Methodology

Sequence of HDPE liner construction for wall

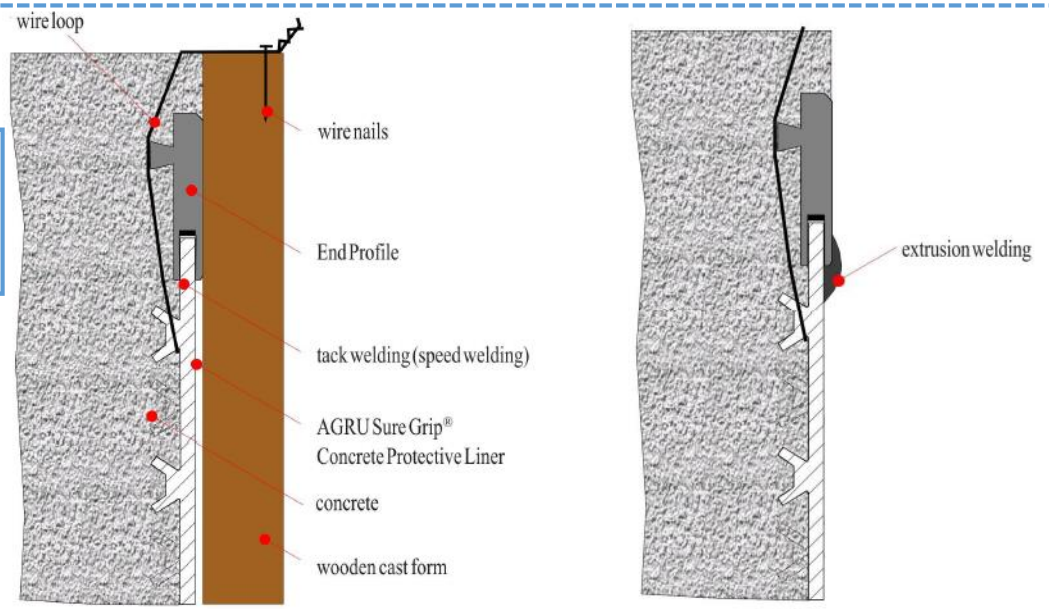
STEP 3

- Seaming Join by extrusion welding



NOTES

- Using end profile for termination of the wall lining system

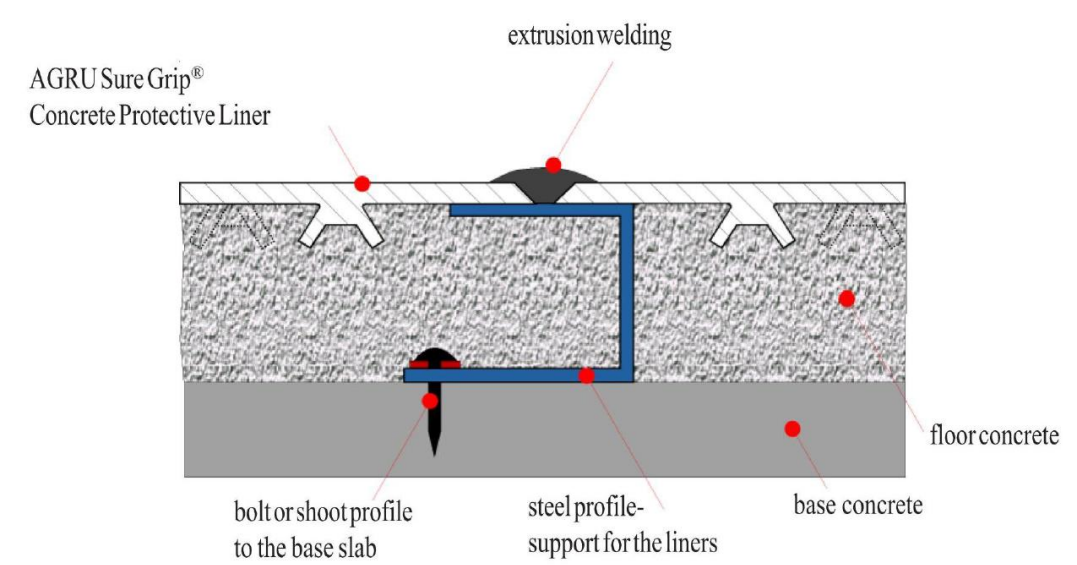


Construction Methodology

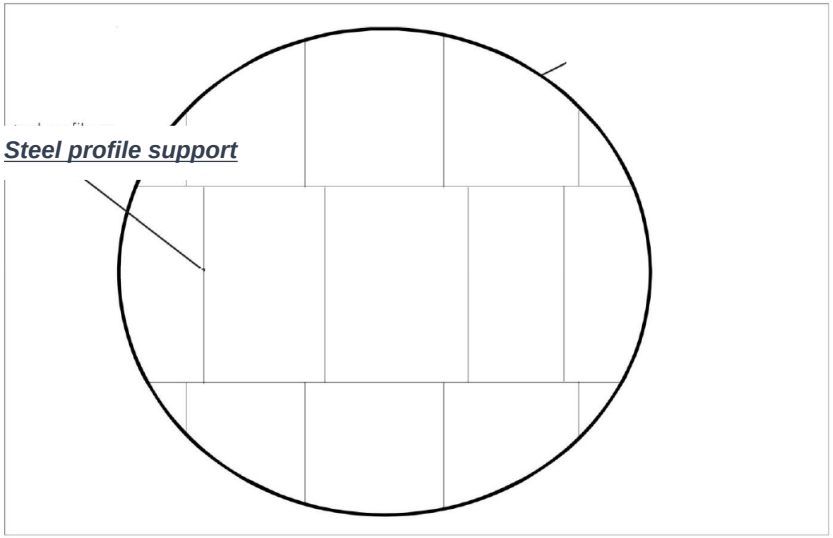
Sequence of HDPE liner construction for bottom floor

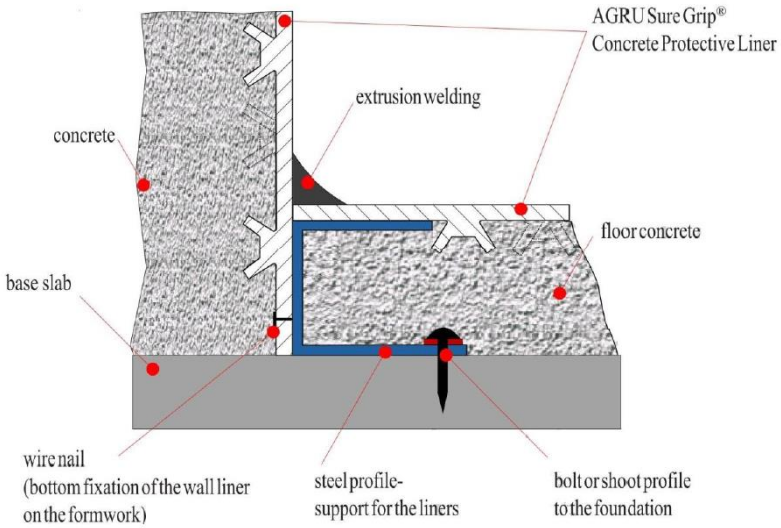
SEQUENCE

- Installing steel profile on the base concrete to support for the liners.
- Casting floor concrete layer.
- Installing HDPE liner on wet surfare concrete. After laying the HDPE liner, covering entire surface with wooden boards and weight bags
- Seaming Join by extrusion welding



Zoning for steel profile support





Construction Methodology

Sequence of HDPE liner construction / Examples

Exmples: Assembly of HDPE liner onto wooden formwok – cast in situ applications

Construction Methodology

Sequence of HDPE liner construction / Examples

Exmples: Assembly of HDPE liner onto bottom floor

Construction Methodology

method statement for construction of flat floor

Laser Beam Screed

Ride on Machine

Vibrator Machine

Walk behind Trowel

CONTRUCTION MACHINERY

Construction Methodology

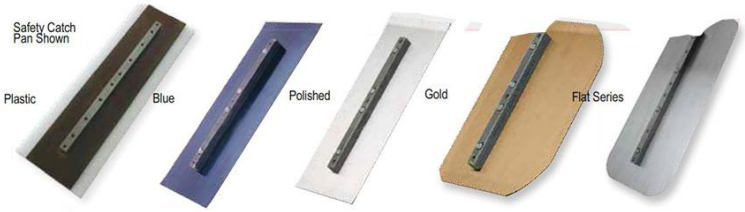
method statement for construction of flat floor

Bump Cutter

Check Rod

Chanel Float

Finishing Blade Tools



Dipstick 2272 Floor Profiler

HANDLE TOOLS FOR MAKING FLAT SURFACE OF CONCRETE

Construction Methodology

Method statement for construction of flat floor

STEP 1: INSTALLATION OF CONSTRUCTION JOINT, RAIL SUPPORTING SYSTEM

Construction Methodology

method statement for construction of flat floor

STEP 2: CHECKING SLUMP OF CONCRETE

Construction Methodology

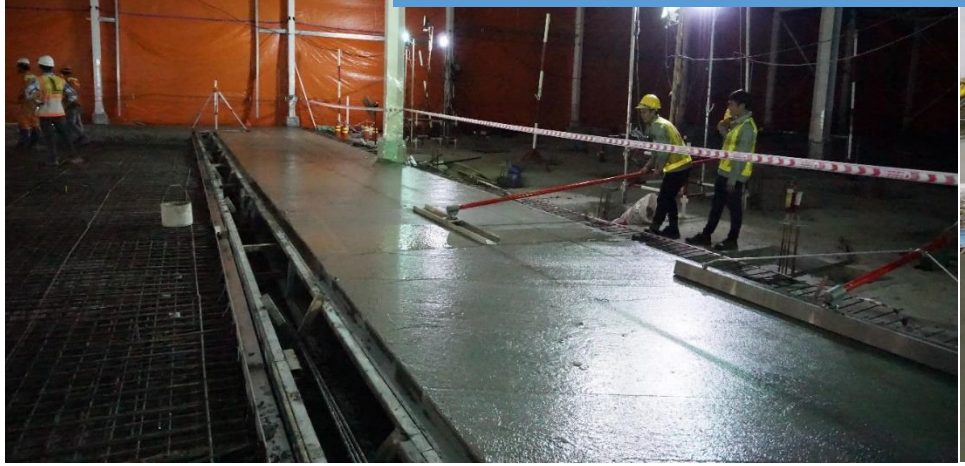
method statement for construction of flat floor

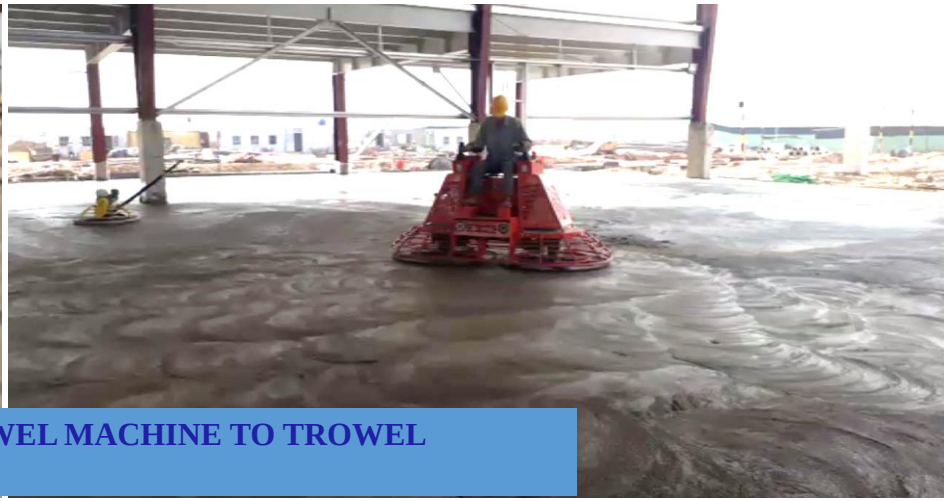
STEP 3: CASTING CONCRETE USING STRUSS CREED MACHINE OR USING LASER SCREED

Construction Methodology

method statement for construction of flat floor

STEP 4: USING BUMP CUTTER, CHECK ROD, CHANNEL FLOAT TOOLS TO SCREED TO MAKE CONCRETE SURFACE FLAT

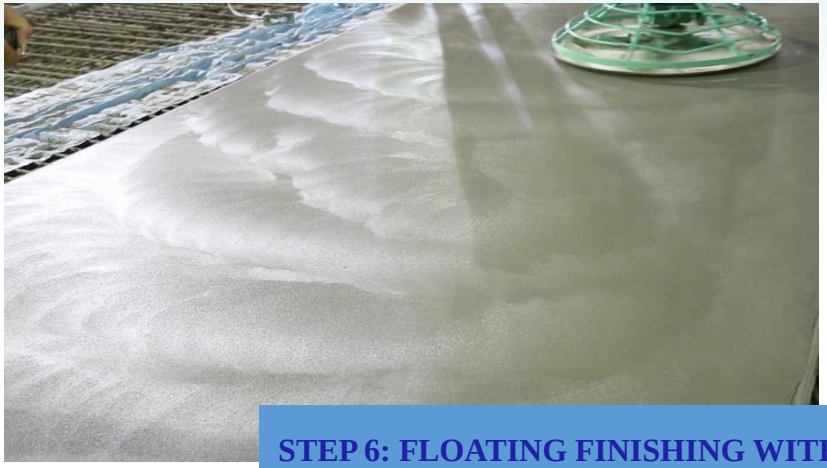




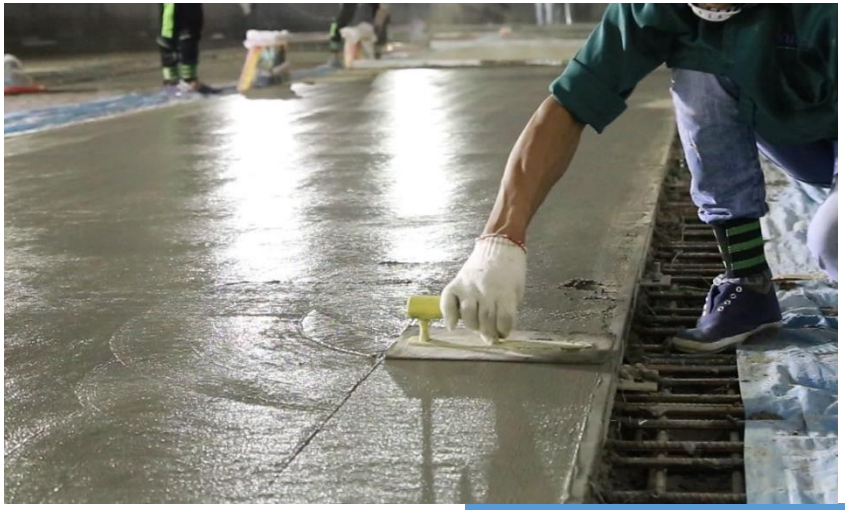
STEP 5: USING RIDE ON TROWEL MACHINE TO TROWEL CONCRETE SURFACE

Construction Methodology

method statement for construction of flat floor



STEP 6: FLOATING FINISHING WITH WALK BEHIND MACHINE

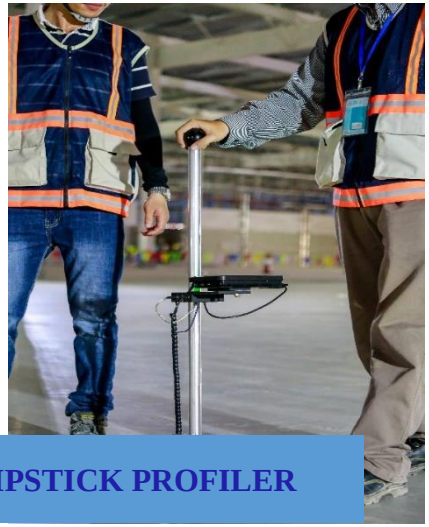


HANDLE FINISHING WITH BLADE AT THE EDGE, CONSTRUCTION JOINT, COLUMN

Construction Methodology

method statement for construction of flat floor

CURING BY WATERING AND PVC SHEET OR SIKA, PROTECT FINISHED FLOOR



STEP 7: CHECKING LEVEL OF SLAB BY DIPSTICK PROFILER

Construction Methodology

Method statement for applying liquid hardener to concrete floor

MACHINE AND EQUIPMENT OF CONSTRUCTION

Heavy duty floor grinding machine

High speed floor polisher machine

Floor buffer

Floor scrubber washing machine

Sprayer Pressure

Polishing Pad from Grit #100 to #1000

Construction Methodology

Method statement for applying liquid hardener to concrete floor

STEP 2: SURFACE TREATMENT

Starting polishing the floor with resin pad #100 and #200 to remove all contamination, cement, coating chemical, etc. on the substrate.

Construction Methodology

Method statement for applying liquid hardener to concrete floor

STEP 2: SURFACE TREATMENT

Deep clean with water. After that, use squeegee to reomove all water on the surface. Finally, clean the floor by scrubber washing machine.

Construction Methodology

Method statement for applying liquid hardener to concrete floor

STEP 3: SPRAY THE LIQUID HARDENER TO CONCRETE FLOOR

Prepare liquid hardener. Technical Data is described in Product catalogue, usage coverage from manufacturer.

Apply the liquid hardener to the floor by spraying with low pressure or by spreeding the liquid hardener with the designed coverage. Use the wet mop and squeegee to make the liquid hardener cover and absorb uniformly.

Waiting for 20-40 minutes for the concrete substrate absorb the liquid hardener well. After the floor is dry, start polishing the floor.

Construction Methodology

Method statement for applying liquid hardener to concrete floor

STEP 4: POLISHING THE FLOOR

+ Sau từ 40-60 phút kể từ khi phun chất lỏng tăng cứng, tiến hành đánh bóng sàn bằng phíp số #400, đánh 01 lượt qua tất cả bề mặt sàn.

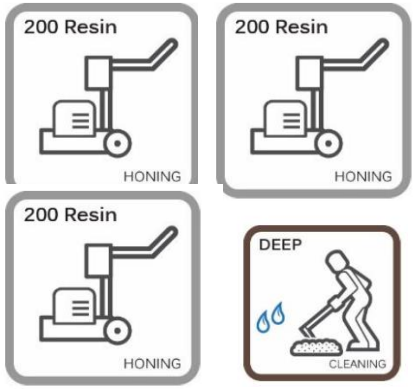
After spraying liquid hardener for 40-60 minutes, start to polish the floor with the resin pad #400. polish 1 time overall the floor.

+ Tiếp theo, đánh bóng sàn bằng phíp mài sàn #800 đánh 02 lượt ngang và dọc bề mặt sàn để đạt độ bóng cao cho bề mặt sàn.

Next, polish the floor with the resin pad #800, polish 2 times for each pad overall the floor.

+ Sau khi kết thúc quy trình đánh bóng sàn, tiến hành vệ sinh sàn bằng máy chà sàn liên hoàn và bàn giao sản phẩm.

When finishing the polishing process, clean the floor by scrubber washing machine.



Construction Methodology

Method statement for applying liquid hardener to concrete floor

FINISHING FLOOR

05

HEALTH AND SAFETY PLAN

5.1 Safety Policy

5.2 Certificate

5.3 Safety Plan

5.4 Waste Management & Dust Control

5.5 Risk Assessment

Safety Policy

Hoa Binh safety organization comprises the Safety Section, of which the primary function is to provide direction and leadership to the Project Safety Committee to implement the Safety Management System for this project..

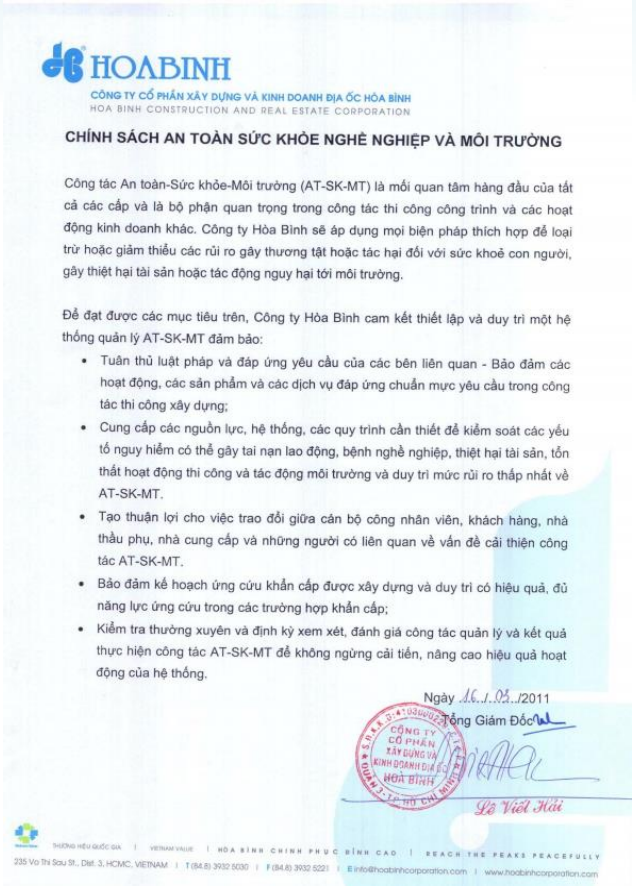
Function of Safety Section

Formulation and implementation of the Project Safety Management System (SMS). Promote enthusiasm & guidance to keep the organization's safety and health program active and productive.

Approving body for the use of all safety equipment & Conduct accident investigation and safety inspections.

Recommend safety measures for implementation & Responsible for first aid facilities.

Administer the penalty system for recalcitrant contractors I workers. Constant review and updating or the Project SMS and other relevant safety standards' guidelines.



HOABINH

CÔNG TY CỔ PHẦN XÂY DỰNG VÀ KINH DOANH ĐỊA ỐC HÒA BÌNH
HOA BINH CONSTRUCTION AND REAL ESTATE CORPORATION

CHÍNH SÁCH AN TOÀN SỨC KHỎE NGHỀ NGHIỆP VÀ MÔI TRƯỜNG

Công tác An toàn-Sức khỏe-Môi trường (AT-SK-MT) là mối quan tâm hàng đầu của tất cả các cấp và là bộ phận quan trọng trong công tác thi công công trình và các hoạt động kinh doanh khác. Công ty Hòa Bình sẽ áp dụng mọi biện pháp thích hợp để loại trừ hoặc giảm thiểu các rủi ro gây thương tật hoặc tác hại đối với sức khoẻ con người, gây thiệt hại tài sản hoặc tác động nguy hại tới môi trường.

Để đạt được các mục tiêu trên, Công ty Hòa Bình cam kết thiết lập và duy trì một hệ thống quản lý AT-SK-MT đảm bảo:

- Tuân thủ luật pháp và đáp ứng yêu cầu của các bên liên quan - Bảo đảm các hoạt động, các sản phẩm và các dịch vụ đáp ứng chuẩn mực yêu cầu trong công tác thi công xây dựng;
- Cung cấp các nguồn lực, hệ thống, các quy trình cần thiết để kiểm soát các yếu tố nguy hiểm có thể gây tai nạn lao động, bệnh nghề nghiệp, thiệt hại tài sản, tổn thất hoạt động thi công và tác động môi trường và duy trì mức rủi ro thấp nhất về AT-SK-MT.
- Tạo thuận lợi cho việc trao đổi giữa cán bộ công nhân viên, khách hàng, nhà thầu phụ, nhà cung cấp và những người có liên quan về vấn đề cải thiện công tác AT-SK-MT.
- Bảo đảm kế hoạch ứng cứu khẩn cấp được xây dựng và duy trì có hiệu quả, đủ năng lực ứng cứu trong các trường hợp khẩn cấp;
- Kiểm tra thường xuyên và định kỳ xem xét, đánh giá công tác quản lý và kết quả thực hiện công tác AT-SK-MT để không ngừng cải tiến, nâng cao hiệu quả hoạt động của hệ thống.

Ngày 16/05/2011
Tổng Giám Đốc

Lê Viết Hải

THƯƠNG HIỆU QUỐC GIA | VIETNAM VALUE | HÒA BÌNH CHINH PHỤC ĐỈNH CAO | REACH THE PEAKS PEACEFULLY
235 Võ Thị Sáu St., Dist. 3, HCMC, VIETNAM | T (84.8) 3932 5030 | F (84.8) 3932 5221 | E info@hoabinhcorporation.com | www.hoabinhcorporation.com

Hoa Binh safety Policy

Certificates

bsi.

By Royal Charter

Giấy Chứng Nhận

HỆ THỐNG QUẢN LÝ CHẤT LƯỢNG - ISO 9001:2015

Xác nhận rằng: **CÔNG TY CỔ PHẦN XÂY DỰNG VÀ KINH DOANH ĐỊA ỐC HÒA BÌNH**
235 Võ Thị Sáu,
Phường 7, Quận 3,
Thành Phố Hồ Chí Minh,
Việt Nam

Giữ giấy chứng nhận số: **FS 606088**

và thực hiện Hệ thống Quản lý Chất Lượng phù hợp với các yêu cầu của ISO 9001:2015 cho phạm vi:

Thiết kế, phát triển và thi công xây dựng, cơ điện và trang trí nội thất cho các công trình dân dụng, thương mại và công nghiệp.

Đại diện cho tập đoàn BSI: Chris Cheung, Phụ Trách Sự Tuân Thủ & Rủi Ro Châu Á Thái Bình Dương

Ngày đăng ký đầu tiên: **27/10/2010**
Ngày sửa đổi sau cùng: **26/10/2016**
Ngày hiệu lực: **27/10/2016**
Ngày hết hiệu lực: **26/10/2019**

Trang: 1/1

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Further clarifications regarding the scope of this certificate and the applicability of ISO 9001: 2015 requirements may be obtained by consulting the organization. This certificate is valid only if provided original copies are in complete set.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 845 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A member of the BSI Group of Companies.

ISO 9001 (Quality)

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Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM – BS EN ISO 14001:2004 /Cor 1:2009

This is to certify that: **HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY**
235 Vo Thi Sau Street,
Ward 7, District 3,
Ho Chi Minh City,
Vietnam

Holds Certificate Number: **EMS 578514**

and operates an Environmental Management System which complies with the requirements of BS EN ISO 14001:2004/ Cor 1:2009 for the following scope:

Construction, M&E works and interior decoration for civil, commercial and industrial projects.

For and on behalf of BSI: Chris Cheung, Head of Compliance & Risk – Asia Pacific

Original Registration Date: **27/11/2011**
Latest Revision Date: **24/11/2017**
Effective Date: **27/11/2017**
Expiry Date: **14/09/2018**

Page: 1 of 1

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ISO 14001 (Environmental)

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Certificate of Registration

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

This is to certify that: **HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY**
235 Vo Thi Sau Street,
Ward 7, District 3,
Ho Chi Minh City,
Vietnam

Holds Certificate Number: **OHS 578516**

and operates an Occupational Health and Safety Management System which complies with the requirements of BS OHSAS 18001:2007 for the following scope:

Construction, M&E works and interior decoration for civil, commercial and industrial projects.

For and on behalf of BSI: Chris Cheung, Head of Compliance & Risk – Asia Pacific

Original Registration Date: **27/11/2011**
Latest Revision Date: **24/11/2017**
Effective Date: **27/11/2017**
Expiry Date: **26/11/2020**

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OHSAS 18001 (Health & Safety)

HEALTH SAFETY & ENVIRONMENT POLICY

Hoa Binh safety organization comprises the Safety Section, of which the primary function is to provide direction and leadership to the Project Safety Committee to implement the Safety Management System for this project..

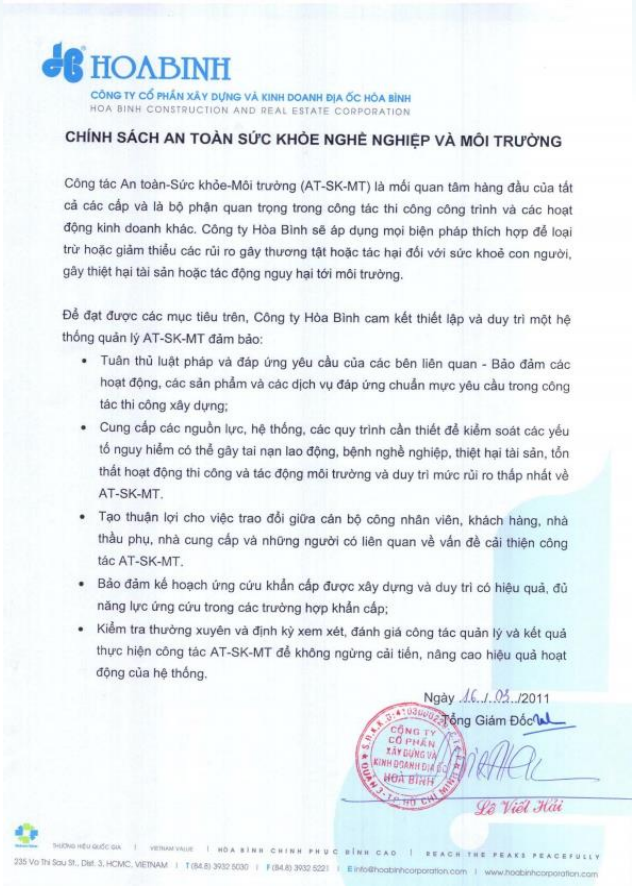
Function of Safety Section

Formulation and implementation of the Project Safety Management System (SMS). Promote enthusiasm & guidance to keep the organization's safety and health program active and productive.

Approving body for the use of all safety equipment & Conduct accident investigation and safety inspections.

Recommend safety measures for implementation & Responsible for first aid facilities.

Administer the penalty system for recalcitrant contractors I workers. Constant review and updating or the Project SMS and other relevant safety standards' guidelines.



HOABINH

CÔNG TY CỔ PHẦN XÂY DỰNG VÀ KINH DOANH ĐỊA ỐC HÒA BÌNH
HOA BINH CONSTRUCTION AND REAL ESTATE CORPORATION

CHÍNH SÁCH AN TOÀN SỨC KHỎE NGHỀ NGHIỆP VÀ MÔI TRƯỜNG

Công tác An toàn-Sức khỏe-Môi trường (AT-SK-MT) là mối quan tâm hàng đầu của tất cả các cấp và là bộ phận quan trọng trong công tác thi công công trình và các hoạt động kinh doanh khác. Công ty Hòa Bình sẽ áp dụng mọi biện pháp thích hợp để loại trừ hoặc giảm thiểu các rủi ro gây thương tật hoặc tác hại đối với sức khoẻ con người, gây thiệt hại tài sản hoặc tác động nguy hại tới môi trường.

Để đạt được các mục tiêu trên, Công ty Hòa Bình cam kết thiết lập và duy trì một hệ thống quản lý AT-SK-MT đảm bảo:

- Tuân thủ luật pháp và đáp ứng yêu cầu của các bên liên quan - Bảo đảm các hoạt động, các sản phẩm và các dịch vụ đáp ứng chuẩn mực yêu cầu trong công tác thi công xây dựng;
- Cung cấp các nguồn lực, hệ thống, các quy trình cần thiết để kiểm soát các yếu tố nguy hiểm có thể gây tai nạn lao động, bệnh nghề nghiệp, thiệt hại tài sản, tổn thất hoạt động thi công và tác động môi trường và duy trì mức rủi ro thấp nhất về AT-SK-MT.
- Tạo thuận lợi cho việc trao đổi giữa cán bộ công nhân viên, khách hàng, nhà thầu phụ, nhà cung cấp và những người có liên quan về vấn đề cải thiện công tác AT-SK-MT.
- Bảo đảm kế hoạch ứng cứu khẩn cấp được xây dựng và duy trì có hiệu quả, đủ năng lực ứng cứu trong các trường hợp khẩn cấp;
- Kiểm tra thường xuyên và định kỳ xem xét, đánh giá công tác quản lý và kết quả thực hiện công tác AT-SK-MT để không ngừng cải tiến, nâng cao hiệu quả hoạt động của hệ thống.

Ngày 16/05/2011
Tổng Giám Đốc

Lê Viết Hải

THƯƠNG HIỆU QUỐC GIA | VIETNAM VALUE | HÒA BÌNH CHINH PHỤC ĐỈNH CAO | REACH THE PEAKS PEACEFULLY
235 Võ Thị Sáu St., Dist. 3, HCMC, VIETNAM | T (84-8) 3932 5030 | F (84-8) 3932 5221 | E info@hoabinhcorporation.com | www.hoabinhcorporation.com

Hoa Binh safety Policy

ISO Certificates

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By Royal Charter

Giấy Chứng Nhận

HỆ THỐNG QUẢN LÝ CHẤT LƯỢNG - ISO 9001:2015

Xác nhận rằng: **CÔNG TY CỔ PHẦN XÂY DỰNG VÀ KINH DOANH ĐỊA ỐC HÒA BÌNH**
235 Võ Thị Sáu,
Phường 7, Quận 3,
Thành Phố Hồ Chí Minh,
Việt Nam

Giữ giấy chứng nhận số: **FS 606088**

và thực hiện Hệ thống Quản lý Chất Lượng phù hợp với các yêu cầu của ISO 9001:2015 cho phạm vi:

Thiết kế, phát triển và thi công xây dựng, cơ điện và trang trí nội thất cho các công trình dân dụng, thương mại và công nghiệp.

Đại diện cho tập đoàn BSI: Chris Cheung, Phụ Trách Sự Tuân Thủ & Rủi Ro Châu Á Thái Bình Dương

Ngày đăng ký đầu tiên: **27/10/2010**
Ngày sửa đổi sau cùng: **26/10/2016**
Ngày hiệu lực: **27/10/2016**
Ngày hết hiệu lực: **26/10/2019**

Trang: 1/1

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ISO 9001 (Quality)

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Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM – BS EN ISO 14001:2004 /Cor 1:2009

This is to certify that: **HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY**
235 Vo Thi Sau Street,
Ward 7, District 3,
Ho Chi Minh City,
Vietnam

Holds Certificate Number: **EMS 578514**

and operates an Environmental Management System which complies with the requirements of BS EN ISO 14001:2004/ Cor 1:2009 for the following scope:

Construction, M&E works and interior decoration for civil, commercial and industrial projects.

For and on behalf of BSI: Chris Cheung, Head of Compliance & Risk – Asia Pacific

Original Registration Date: **27/11/2011**
Latest Revision Date: **24/11/2017**
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ISO 14001 (Environmental)

bsi.

By Royal Charter

Certificate of Registration

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

This is to certify that: **HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY**
235 Vo Thi Sau Street,
Ward 7, District 3,
Ho Chi Minh City,
Vietnam

Holds Certificate Number: **OHS 578516**

and operates an Occupational Health and Safety Management System which complies with the requirements of BS OHSAS 18001:2007 for the following scope:

Construction, M&E works and interior decoration for civil, commercial and industrial projects.

For and on behalf of BSI: Chris Cheung, Head of Compliance & Risk – Asia Pacific

Original Registration Date: **27/11/2011**
Latest Revision Date: **24/11/2017**
Effective Date: **27/11/2017**
Expiry Date: **26/11/2020**

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OHSAS 18001 (Health & Safety)

Client Certificates

VINGROUP

HOABINH
CÔNG TY CP TẬP ĐOÀN XÂY DỰNG HÒA BÌNH

VINHOMES GOLDEN RIVER

Giấy Khen

GIẢI THƯỞNG ĐẠT THÀNH TỰU AN TOÀN
SAFETY RECOGNITION AWARD – 4,5 MILLION SAFE MAN HOURS & ZERO ACCIDENT

GIẢI THƯỞNG NHẰM VINH DANH NHỮNG NỖ LỰC VÀ CỐNG HIẾN GÓP PHẦN ĐẠT MỐC 4,5 TRIỆU GIỜ AN TOÀN KHÔNG TAI NẠN CỦA
BAN CHỈ HUY CÔNG TRÌNH VINHOMES GOLDEN RIVER
CÔNG TY CP TẬP ĐOÀN XÂY DỰNG HÒA BÌNH

Tp.HCM, ngày 24 tháng 05 năm 2018

ĐẠI DIỆN CHỦ ĐẦU TƯ
(Ký tên đóng dấu)
Hoàng Bạch Dương

TỔNG GIÁM ĐỐC
LÊ VIẾT HẢI

TARGET ZERO

Thinking Unboxed

HOABINH
CÔNG TY CỔ PHẦN TẬP ĐOÀN XÂY DỰNG HÒA BÌNH

SAIGONCENTRE

GIẤY KHEN
Certification of achievement

GIẢI THƯỞNG ĐẠT THÀNH TỰU AN TOÀN
SAFETY RECOGNITION AWARD – SAFETY MILESTONES & ZERO ACCIDENT

GIẢI THƯỞNG VINH DANH NHỮNG NỖ LỰC VÀ CỐNG HIẾN GÓP PHẦN ĐẠT MỐC 9.000.000 GIỜ AN TOÀN KHÔNG TAI NẠN TỪ NĂM 2014-2018 CỦA
TẬP THỂ CÔNG TRÌNH SAIGON CENTRE PHASE 2&3
CÔNG TY CỔ PHẦN TẬP ĐOÀN XÂY DỰNG HÒA BÌNH

APPRECIATION AWARDS FOR SAIGON CENTRE PHASE 2&3 PROJECT TEAM -HOA BINH CONSTRUCTION GROUP JOINT STOCK COMPANY
ALL OF YOUR EFFORTS, DEDICATION TO ACHIEVE 9.000.000 SAFE MAN HOURS WITHOUT LOST TIME ACCIDENT FROM 2014-2018.

Tp.HCM, ngày 07 tháng 05 năm 2018

ĐẠI DIỆN CHỦ ĐẦU TƯ
BERNARRD SIDHU

TỔNG GIÁM ĐỐC
LÊ VIẾT HẢI

TARGET ZERO

HSE ORGANIZATION CHART 2018

HOABINH
CÔNG TY CỔ PHẦN XÂY DỰNG VÀ KINH DOANH ĐỊA ỐC HÒA BÌNH
HOA BINH CONSTRUCTION AND REAL ESTATE CORPORATION

HBC HSE COMMITTEE
HỘI ĐỒNG HSE CÔNG TY
1. BAN ĐIỀU HÀNH / PHÓ TỔNG PHỤ TRÁCH
2. GIÁM ĐỐC AN TOÀN (ỦY VIÊN THƯỜNG TRỰC)
3. GIÁM ĐỐC PHÒNG BAN LIÊN QUAN (HR, ISO, KHỐI CÔNG TRƯỜNG, ĐẤU THẦU , MEP, THIẾT BỊ, QUẢN LÝ THẦU PHỤ …)
4. ĐẠI DIỆN CÔNG ĐOÀN , iSO

❖**HỌP HÀNG QUÝ ĐỂ ĐÁNH GIÁ TÌNH HÌNH HOẠT ĐỘNG VÀ BAN HÀNH BIỆN PHÁP THI CÔNG CHUẨN**

MANAGEMENT BOARD
BAN ĐIỀU HÀNH

DEPUTY CEO
PHÓ TỔNG GIÁM ĐỐC

HSE DIRECTOR
GIÁM ĐỐC HSE

HSE AUDITOR
CHUYÊN VIÊN HSE

REGIONAL HSE MGR
TRƯỞNG KHU VỰC 2

HSE MGR
TRƯỞNG KHỐI QUỐC TẾ

REGIONAL HSE MGR
TRƯỞNG KHU VỰC 1

DEPUTY HSE MANAGERS
PHÓ BAN MIỀN BẮC
PHÓ BAN MIỀN TRUNG
PHÓ BAN QUẢNG NINH

DEPUTY HSE MANAGERS
PHÓ BAN THƯỜNG TRỰC
PHÓ BAN MIỀN NAM
PHÓ BAN PHÚ QUỐC
PHÓ BAN NHA TRANG

SITE HSE MANAGERS
QUẢN LÝ HSE CÔNG TRƯỜNG > 80

Safety training & group meeting

OUTSIDE THE GATE

INSIDE THE GATE

Safety training & meeting

Safety training for workers

Tool-box meeting everyday

Safety training for engineers

Give bonus for worker

Safety Plan

Environment and Health Management

Fire fighting training on site

Organize of health care

Flammable hazards, fire protection

Rest area for workers

Waste Management & Dust Control

Seperae into different Catagories

Air quality control

Transporting waste

Water quality control

Waste Management & Dust Control

Risk Assessment

Risk management

Identification — Through the facilitated workshops attended by All key project personnel

Recording — Identified risks in the form of a risk register

Risk Analysis — To rank risks in terms of likelihood of occurrence and severity of impact

Ownership — Allocated to individual managers

Mitigation — By proactively implementing output driven action plans

Contingency planning — By developing fallback plans and trigger mechanisms

Monitoring — And reporting of risk mitigation

Re-assessment — And reporting in the light of emerging events

SAIGON CENTRE PHASE 1 AND PHASE 2&3
MAIN CONTRACT PACKAGE

SAIGONCENTRE HOABINH

HOA BINH CORPORATION

SAIGON CENTRE
SAFETY & HEALTH HAZARD LOG

Title:	RISK ASSESSMENT	**DOC. NO: REVISION**	SG23/HBC/RFA/ST/MOS/WB/01.RevB
Company:	HOABINH CORPORATION	**ANALYSIS CONDUCTED BY: (Team Member Name)**	Michael Tran (SPD), Phan Thanh Phuc (CM), Vo Hoan Kiem (SM)
Process/ Location:	GATE 1, GATE 3 (Refer to Washing Bay Layout Plan in Anex 1)	**Prepared by:**	Mr. VO HOAN KIEM (*Safety Manager*) Signature: *Date: 12th Apr, 2014*
Approved by (PD)	Mr. MICHAEL TRAN (*Senior Project Director*) Signature: *Date: 12th Apr, 2014*	**Reviewed by:**	Mr. PHAN MINH PHUC (Construction Manager) Signature: *Date: 12th Apr, 2014*

RISK ASSESSMENT FOR WASHING BAY

1.HAZARD IDENFICATION			2.RISK EVALUATION				3.RISK CONTROL					
1A No	1B Work Activity	1C Hazard	2A Existing Risk Control	2B Severity	2C Likelihood	2D Risk Level	3A Additional Risk Control	3B Severity	3C Likelihood	3D Risk Level	3E Action by	3F Comment
1	Begin of works	Wrong tools.	Check, correct tools, approved, inspected and color coded, fit & ready to use.	Minor (2)	Remote (2)	Medium risk (4)	Ensure Toolbox Meeting is carried out; pre-task analysis and proper planning prior to execution of silt works.	Negligible (1)	Rare (1)	Low (1)	Engineer	
2	Preparation of Tools & Equipment	Damaged equipment. Wrong materials	Ensure all equipments are checked & inspected in good working condition. Ensure to have proper and correct materials (eg: brick, cement, concrete...)	Minor (2)	Remote (2)	Medium risk (4)	Compliance with Inspection & Maintenance checklist & requirements	Negligible (1)	Rare (1)	Low (1)	Engineer Supervisor	

Project: Saigon Centre
Produced by: Hoabinh Corporation.
Assessment Duration: 7days
Document No.: SG23/HBC/RFA/ST/MOS/WB/01

Page 23

The risk analysis in SaiGon Centre project

Risk Assessment

	HEINEKEN VIETNAM BREWERY - VUNG TAU PHASE 5.1		
Title:	RISK ASSESSMENT	**DOC. NO: Rev00**	HEI/HBC/MS/LBR/Rev00
Company:	HOABINH CORPORATION		
Process/ Location:	HEINEKEN VIETNAM BREWERY - VUNG TAU PHASE 5.1		

RISK ASSESSMENT FOR SCAFFOLDING WORK												
1. HAZARD IDENFICATION			2. RISK EVALUATION				3. RISK CONTROL					
1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	3D	3E	3F
No	Work Activity	Hazard	Existing Risk Control	Consequence	Likelihood	Risk Level	Additional Risk Control	Consequence	Likelihood	Risk Level	Action by	Comment
1	Erection of scaffold	Falling objects	Checking all the knots Provide and use PPE (safety helmets)	Major (4)	Occasional (3)	Medium risk (12)	Cordon off work area with warning sign posted Safety inspection at area	Major (4)	Rare (1)	Medium risk (4)	Supervisor	
2	Ditto	Fall from height	Erection team needs to wear safety harness Provide barricades around	Major (4)	Remote (2)	Medium risk (8)	Close supervision	Major (4)	Rare (1)	Medium risk (4)	Supervisor	
3	Ditto	Collapse of scaffold during erection	All bracing to be adequately secured to prevent toppling	Major (4)	Occasional (3)	Medium risk (12)	Supervision and inspection by supervisor	Major (4)	Rare (1)	Medium risk (4)	Supervisor	

The risk analysis in Heineken Vietnam brewery

Risk Assessment

RISK ASSESSMENT FOR REBAR WORK												
1. HAZARD IDENFICATION			2. RISK EVALUATION				3. RISK CONTROL					
1A	1B	1C	2A	2B	2C	2D	3A	3B	3C	3D	3E	3F
No	Work Activity	Hazard	Existing Risk Control	Consequence	Likelihood	Risk Level	Additional Risk Control	Consequence	Likelihood	Risk Level	Action by	Comment
1	Delivery of materials to site	Truck collision on to worker	Site personal to guide trucks to location and ensure licensed lorry driver	Major (4)	Remote (2)	Medium risk (8)	Banks man to be provided with reflective Vehicle to maintain site speed limit Designated access way	Major (4)	Rare (1)	Medium risk (4)	Supervisor	
2	Hoist material using crane	Toppling of crane	Inspection of cranes Outrigger to be extended fully on firm and solid ground (for mobile crane) Preoperational checks by operator Registered crane operator	Major (4)	Occasional (3)	Medium risk (12)	Crane access inspection. Cordon off area Not to exceed SWL Close supervision PTW system	Major (4)	Rare (1)	Medium risk (4)	Supervisor Engineer	
3	Fabrication at yard (Cutting & Bending)	Cuts and laceration	Cutting and bending machines to be provided with treadle guard Moving parts of machines to be guarded Trained and authorised person to operate machines Provide and use PPE	Moderate (3)	Occasional (3)	Medium risk (9)	Regular maintenance of machinery Tool box meeting before work	Moderate (3)	Rare (1)	Low risk (3)	Supervisor , Engineer	
4	Ditto	Trip and Fall	Passageway and work area to be cleared of all materials and scrap	Moderate (3)	Occasional (3)	Medium risk (9)	Daily housekeeping	Moderate (3)	Rare (1)	Low risk (3)	Supervisor . Engineer	
5	Ditto	Strains and sprains	Proper work posture	Moderate (3)	Occasional (3)	Medium risk (9)	Toolbox meeting before working	Moderate (3)	Rare (1)	Low risk (3)	Supervisor . Engineer	
6	Installation of rebar	Sharp edges Trip & fall	Proper gloves Clear Unobstructed access	Minor (2)	Occasional (3)	Medium risk (6)	Ensure close supervision	Minor (2)	Rare (1)	Low risk (2)	Supervisor . Engineer	

JOB SAFETY ANALYSIS

HOA BINH CORPORATION	GENERAL JOB SAFETY ANALYSIS	Project:	HEINEKEN VIETNAM BREWERY - VUNG TAU PHASE 5.1
		Ref No.:	HEI/HBC/ MS/LBR/Rev00
	Industrial project	Rev No.:	Rev00
		Page:	02

Task	Hazards	Number of people exposed to risk	Severity/probability **Severity:** Catastrophic, serious, moderate, minor **Probability:** Very likely, likely, unlikely, remote	Risk rating (Severity x probability = risk rating)	Protective measures (alternative methods)	Risk level High, medium, low, negligible
1. TERMITE TREATMENT						
Identify termite treatment application	-To sniff toxic gas -To eat toxic chemical -Toxic chemical can throw into eyes, body		serious/likely = 4/3	4 x 3 = 12	-Safety training for worker before work - Isolate work area - Having MSDS Marks, Gloves, Safety glasses/ safety uniform, boots	medium
Inspect termite treatment application	-To sniff toxic gas -To eat toxic chemical -Toxic chemical can throw into eyes, body		serious/likely = 4/3	4 x 3 = 12	Safety training for worker before work - Isolate work area - Cover work area - Having MSDS	medium

Thank you!