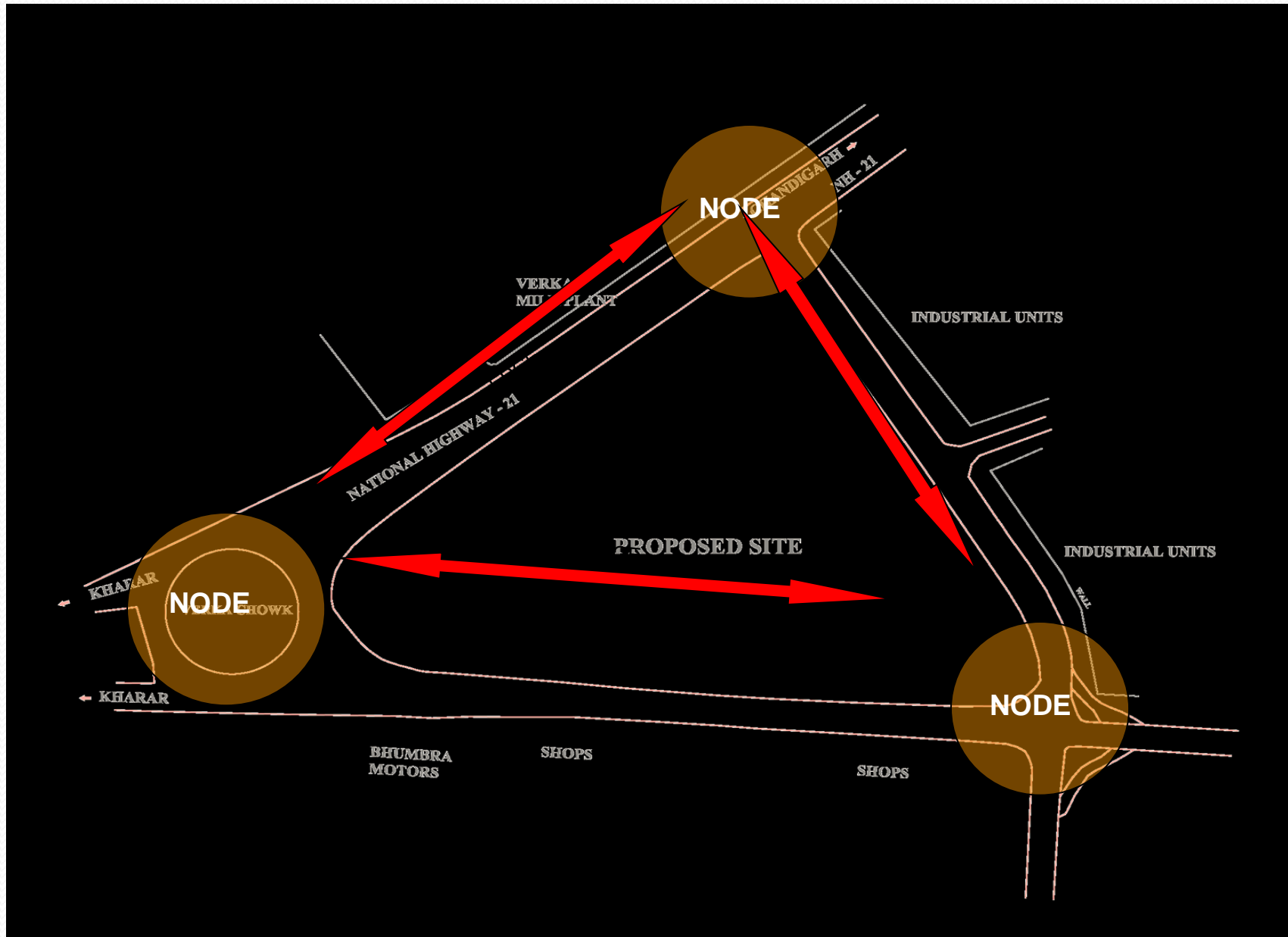


Aerial View



DATE:- 03.06.2015

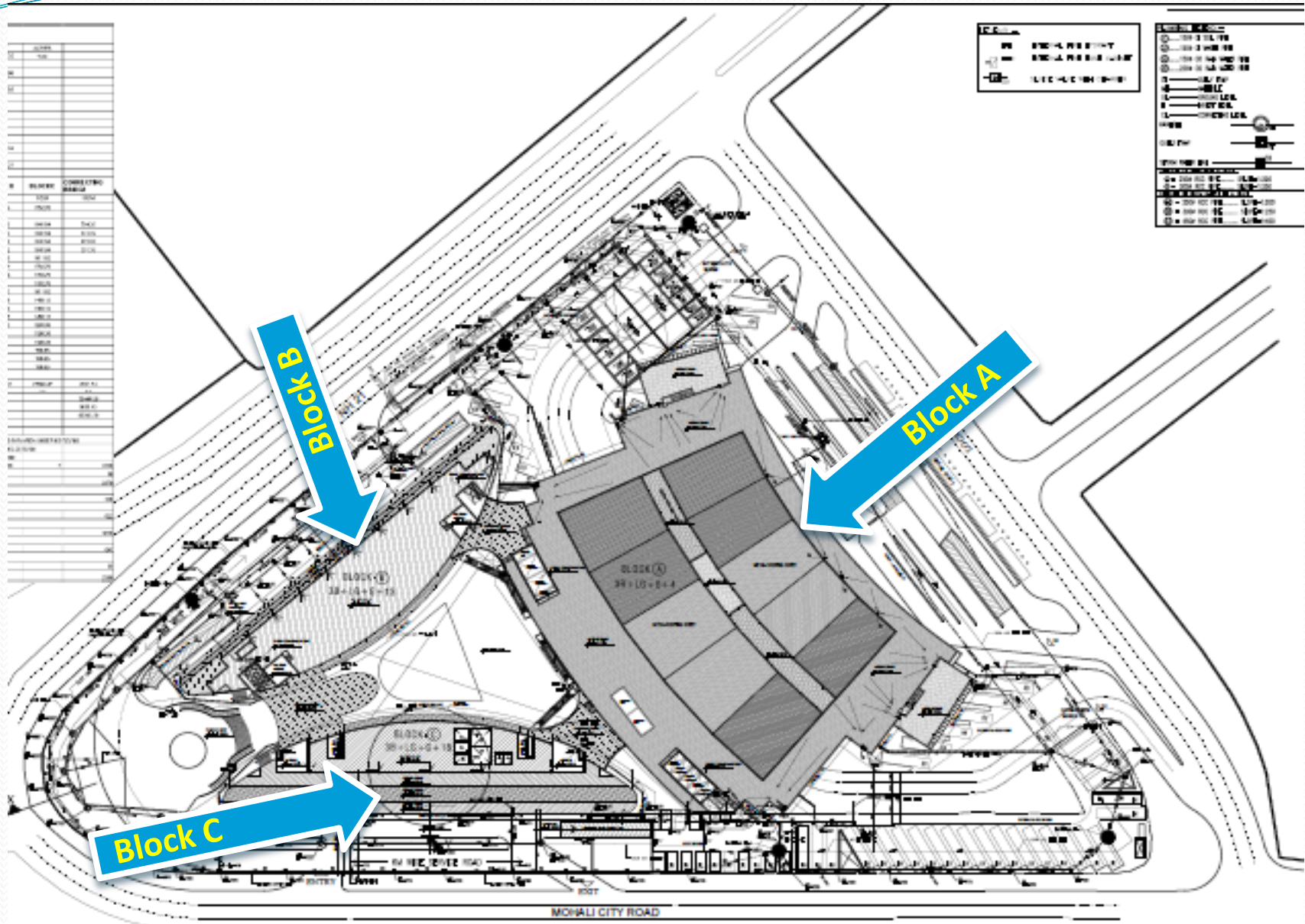
Orientation Plan



Brief Detail of Project

- Project Name : Development of Bus Terminal cum Commercial Complex at Mohali, Punjab
- Client : GMADA(Concessioneing Authority), DoT & PIDB
- Concessionaire : XXXXXXXXXXXXXXXXXXXX
- Contractor : XXXXXXXXXXXXXXXXXXXX
- EPC Agreement Cost : INR 316.50 Cr (Original -15th June 2009)
INR 392.00 Cr (Revised – 1st April 2015) (+24%)

Plan of the Project



Statutory Approvals

Major Statutory Approvals Obtained

- Possession of site
- CGWB clearance
- Permission of excavation
- Approval for using municipal road
- Building Height Clearance from AAI
- EIA Clearance
- Cutting of Trees
- Labour registration
- NOC from Fire Department
- Mega Project Approval

Built Up Area Details

Figures in Sq.ft.

Description	Block A	Block B	Block C
Basements	329189	168315	164729
GF to FF	91131	45564	48418
Floor 2 to 4	200838	59732	72471
Floor 5 to 14		148942	161144
Floor 15 to 17			28211
Total	621158	422553	474973
Total Built Up Area = 1518684 (Basement = 662233, Super Structure = 856451) FAR = 938951			

Utilization of floors

Block A (ISBT, Food Zone, Cineplex)

Floor	Usage
Basement -2	Car Parking (Semi Automatic) (550 ECS)
Basement - 1	a)Service area such as plant room; Substation; DG Room; Air washer & STP/WTP b)Car Parking (Semi Automatic) (150 ECS)
LGF	Clock Room; Rest room for maintenance staff; Stores & Two wheelers parking (100 no.)
GF & FF	Waiting lounge for passengers; Ticket counters; Public utilities ; Kiosks; Dormitories; PRTC offices & Retail shops
2 nd Floor	Food court; Fine dinning ; Entertainment Zone & Retail shops
3 rd to 5 th Floor	Cinema hall (Cinepolis-9 screen)

Utilization of floors

Block B

Floor	Usage
Basement -1,2,3	Car parking (Fully Automatic) (350 ECS)
LGF	Banquet Hall & Parking (conventional)
GF – 3 rd Floor	Retail Shops
4 th Floor	Modular Offices
5 th to 6 th Floor	Business Condo Suites
7 th to 13 th Floor	Hotel & Service floor

Utilization of floors

Block C

Floor	Usage
Basement -1,2,3	Car parking (Fully Automatic) (550 ECS)
LGF	Hyper Market & Parking (Conventional)
GF – 3 rd Floor	Retail Shops
4 th Floor	Modular Offices
5 th to 17 th Floor	Corporate Offices

QC & QA Systems

- QC & QA manual defined
- QC & QA team is defined
- In house laboratory with testing facility for Cement, Bricks, Aggregate, Concrete, Reinforcement (Physical)
- All other test apart from the above mentioned are being conducted through external approved laboratories at Chandigarh/Mohali

Approx. 56000 Cum of concrete of design Mix M10 to M60 have been tested in house.

Safety, Health and Environment (SHE)

SHE manual is defined and team is headed by experienced Safety Manager
Main objective of Safety program is as follows

- To provide safe working environment at all times
- To observe safety awareness
- To observe work with high safety standards
- To ensure health and safety of all workers /staff
- To ensure minimum disruption to work process and protect public from injury and damage of property

• Number of man hours worked	- 43, 13 694
• Number of Reportable accidents	- 22
• Number of Dangerous occurrence	- Zero
• Number of Man Hours lost	- Nil

Balance Work Status of ISBT (GF & FF Only)

Activity	Balance till date	Jul 15	Aug 15	Sep 15	Oct 15	Nov- 15`
Balance Structure work	2%					
Insulated Roof Sheeting	100%					
Granite & Tiles Flooring	30%					
False Ceiling- ACP, Gypsum	70%					
Facade work/Glazing/ Cladding	75%					
Painting Works	50%					
Boundary Wall	20%					
Plumbing and Fire fighting	30%					
HVAC Work	30%					
Electrical Works	20%					
External Development	80%					
Lifts & Escalators	50%					
DG Works	80%					
Parking and PIDS	80%					
BMS, Fire alarm , CCTV and PA	70%					
STP & WTP	10%					
Signages	100%					
Testing and Commisioning						
Stage wise hand over						

ISBT Shall be Completed and Commissioned in 5 months time.

Construction Programme of ISBT (GF & FF)

ID	Task Name	Duration	Start	Finish	July	August	September	October	November
1	Completion Programme of only ISBT	109 days	Wed 01-07-15	Tue 24-11-15	[Gantt bar spanning from July to November]				
2	Balance Structure Work	23 days	Wed 01-07-15	Fri 31-07-15	[Gantt bar from July 1 to July 31]				
3	Insulated Roof Sheeting	34 days	Fri 17-07-15	Mon 21-08-15	[Gantt bar from July 17 to August 21]				
4	Granite & Tiles Flooring	67 days	Fri 17-07-15	Thu 15-10-15	[Gantt bar from July 17 to October 15]				
5	False Ceiling- ACP, Gypsum	77 days	Sat 01-08-15	Thu 12-11-15	[Gantt bar from August 1 to November 12]				
6	Facade work/Glazing/ Cladding	80 days	Wed 15-07-15	Fri 20-10-15	[Gantt bar from July 15 to October 20]				
7	Painting Works	76 days	Mon 02-08-15	Sun 15-11-15	[Gantt bar from August 2 to November 15]				
8	Boundary Wall	25 days	Wed 15-07-15	Sat 15-08-15	[Gantt bar from July 15 to August 15]				
9	Plumbing and Fire fighting	102 days	Wed 01-07-15	Sun 15-11-15	[Gantt bar from July 1 to November 15]				
10	HVAC Work	92 days	Wed 15-07-15	Sun 15-11-15	[Gantt bar from July 15 to November 15]				
11	Electrical Works	81 days	Wed 15-07-15	Sat 31-10-15	[Gantt bar from July 15 to October 31]				
12	External Development	79 days	Sat 01-08-15	Sun 15-11-15	[Gantt bar from August 1 to November 15]				
13	Lifts & Escalators	56 days	Tue 01-08-15	Sun 15-11-15	[Gantt bar from August 1 to November 15]				
14	DG Works	66 days	Sat 15-08-15	Sun 20-11-15	[Gantt bar from August 15 to November 20]				
15	Parking and RDS	45 days	Sat 01-08-15	Wed 20-09-15	[Gantt bar from August 1 to September 20]				
16	BMS, Fire alarm , CCTV and PA	92 days	Wed 15-07-15	Sun 15-11-15	[Gantt bar from July 15 to November 15]				
17	STP & WTP	46 days	Tue 15-09-15	Sun 15-11-15	[Gantt bar from September 15 to November 15]				
18	Signages	34 days	Thu 01-10-15	Sun 15-11-15	[Gantt bar from October 1 to November 15]				
19	Testing and Commissioning	35 days	Thu 15-10-15	Mon 20-11-15	[Gantt bar from October 15 to November 20]				
20	Stage wise hand over	22 days	Mon 02-11-15	Mon 20-11-15	[Gantt bar from November 2 to November 20]				

Quantum of Balance Civil Activities for Completion of ISBT (G.F & F.F)

S.NO.	Activity	Description	Unit	Balance Quantity
A.	Internal Works			
1	RCC Work	Water tank & staircase at top floor	Cum	215
2	Reinforcement Work	Water tank & staircase at top floor	MT	20
3	Brickwork	Misc Brick work at GF &FF	Cum	55
4	Plaster	GF &FF	Sqm	400
5	Interior work /False Ceiling/Wooden counter/Paneling	First Floor and GF Toilets	Sqm	6000
6	Flooring - Granite 25mm thick	GF &FF	Sqm	2000
7	Vitrified Tile work	GF &FF	Sqm	460

Quantum of Balance Civil Activities for Completion of ISBT (G.F & F.F)

S.NO.	Activity	Description	Unit	Balance Quantity
8	IPS Flooring- 50mm	Panel room , LGE, FF,GF	Sqm	500
9	Painting, Interior, Ceiling and Exteriors	GF &FF	Sqm	20000
10	Sheeting on Audi Roof (Truss Installed)	Top Roof	Sqm	3685
11	Façade	Frontal Elevations	Sqm	2480
12	Stone cladding	Front Façade on both side and side portion	Sqm	110
13	Trespa panel	Front Façade above 2nd Floor	Sqm	308
14	ACP on fins	Front Façade from GF to 2nd Floor	Sqm	600
15	Structural Steel work	Front façade	MT	115

Quantum of Balance Civil Activities for Completion of ISBT (G.F & F.F)

S.No.	Activity	Description	Unit	Balance Quantity
B. External Works				
1	Pavement Quality Concrete	GF	Sqm	1175
2	Kerb Stone	GF and exterior area	cum	15
3	Paver CC Tile 20mm thick	External area	Sqm	3000
4	Road Work (Total pavement thickness 590 mm)	External work	Sqm	5800

Quantum of Balance MEP Activities for Completion of ISBT (G.F & F.F)

S.NO.	Activity	Description	Balance Quantity
A.	Internal Works		
1	Plumbing work (Fixture available at site , installation after completion of civil work)	Toilets, drainage Piping, rainwater, pump room	30%
2	Firefighting Work (Piping of GF & FF complete)	Fire pump Room Sprinklers Piping, Hydrant piping	30%
3	HVAC Work		30%
	Chiller, Pumps, expansion tank, AHU, FCU, AW, Panels, Ducting, Piping & Insulation	Installed	
4	Electrical Work		20%
	Transformers, HT Panel, LT panels, Conduiting, Wiring, Cabling	Installed	
5	Lifts & Escalators (100% material available at site)	Cabins to be installed	50%

Quantum of Balance MEP Activities for Completion of ISBT (G.F & F.F)

S.NO.	Activity	Description	Balance Quantity
6	DG Works (Piping and cooling tower partially complete)		80%
7	Parking and PIDS (Partial wiring done at GF and LGF)	Ticketing Cabins, Boom Barriers	80%
8	BMS, Fire alarm, CCTV and PA (Wiring Complete at LGF, GF and FF)	Speakers, CCTV, Fire Alarms	70%
9	STP / WTP	Testing & Commissioning	10%
B.	External Works		
1	External Development		80%
	Drainage Work, Sewage line, bore well, Electrification Work	Cabling, Electric Poles, Sewage piping	

Material Available at Site

S.No.	Description	UOM	QTY
1	18 mm Ply for counters	sqm	96
2	4 mm Ply for counters	sqm	264
3	Paint	Ltr	2000
4	ACP	Sqm	312
5	CC Tiles	SQm	250
6	Choukhats	Nos	40
7	MS Structure	MT	22
8	Stone for Flooring	sqm	632
9	Stone for cladding	Sqm	106
10	Gypsum board for ceiling	sqm	4060
11	Framing material For False ceiling	sqm	1800
12	Aluminium Material	sqm	1200
12	TMT steel	MT	32

Organization Structure

Project Head (Mr. Bahadur Singh)

Technical Staff

1 Planning Manager	1 No.
2 Planning Assistant	1 No.
3 Senior Engineer (MEP & P&M)	1 No.
4 Site Engineer (Construction)	1 No.
5 Junior Engineer (Construction)	1 No.
6 QC/QA Deptt (QC Supervisor)	1 No.
7 Foreman Shuttering and Rebar's	1 No.
8 Foreman Civil works	1 No.
9 Foreman MEP & P&M	1 No.
10 Supervisor (Civil & MEP)	3 No.
11 Tower Crane Crew	2 No.
12 Other supporting staff (Operators/Technicians)	2 No.
13 Safety Supervisor	

Supporting Staff

1 Accounts Manager	1 No.
2 Accounts Assistant	1 No.
3 Assistant Manger (HR & admn)	1 No.
4 Stores In charge	1 No.
5 Purchase Executive	1 No.
6 I.T Executive	1 No.
7 Supervisor Stores	1 No.
Total	25 No.

Plant & Machinery Available at Site

S.No.	Description	UOM	QTY
1	Tower Crane	No.	2
2	DG 125 KVA	No.	3
3	DG 15 KVA	No.	1
4	Back Hoe	No.	1
5	Tractor Trolley	No.	1
6	Bobcat	No.	1
7	Bar Cutting Machine	Nos.	3
8	Bar Bending Machine	Nos.	3
9	Wood Cutter Machine	No.	1
10	Plate Compactor	Nos.	2
11	Electric Vibrator	Nos.	3
12	Diesel Vibrator	Nos.	6
13	Scaffolding Material such as Cuplock, vertical, ledger	Sqm	10000
14	Shuttering Ply	Sqm	5000

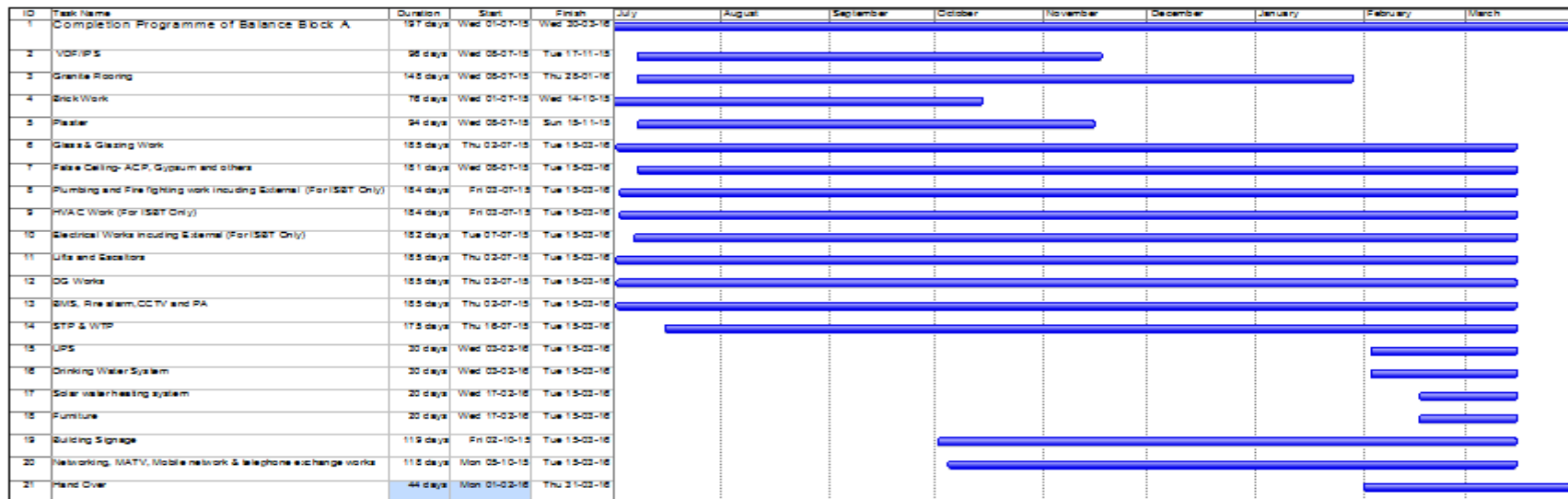
Methodology For Completion of ISBT (G.F & F.F)

- Roof Sheeting is an independent activity shall be taken up in parallel.
- Major activities except false ceiling , such as flooring, toilets work, door shutters and other wood work are separate independent activities Specialized agencies will be deployed.
- Façade work on external front of tower is all together a independent activity and shall be carried out by independent agency
- Most of MEP works appurtenant of ISBT such as firefighting, Electrical work, HVAC works, Plumbing, PIDS are completed to a major extent
- Elevators / Escalators are available at site and their installation shall be taken up in parallel

Methodology For Completion of ISBT (G.F & F.F)

- BMS is also an independent activity and will be taken up in parallel.
- External work such as drain work, external lighting, bore well shall be carried out by different agencies. Coordination drawing are already available. These services are passing below green area.
- PQC and Road work is mostly mechanized . Work shall be taken up independently
- Painting of exteriors / interior which is already in progress shall be given final touches in the last before handing over.

Construction Programme of ISBT Block A (2nd Floor Onwards)



- Second Floor comprising of Food Court Entertainment Zone shall be completed and commissioned in 9 months
- Cineplex shall be completed in 12 months

Quantum of Balance Block A Civil (2nd Floor Onwards)

S.NO.	Activity	Description	Unit	Balance Quantity
A.	Basement B1			
1	VDF Floor	Flooring at B1	Sqm	3500
2	Snowcem painting		Sqm	15300
B.	Basement B2			
1	IPS Flooring		Sqm	1750
2	Snowcem painting		Sqm	15300
C.	Second_Floor			
1	Brick work	Walls	cum	170
2	Plaster	Walls	Sqm	1700
3	Granite Flooring	Floor	Sqm	7700

Quantum of Balance Block A Civil (2nd Floor Onwards)

S.no	Activity	Description	Unit	Balance Quantity
D.	Third Floor			
1	False ceiling	2nd Floor	Sqm	7700
2	Toilet Flooring	2nd Floor	Sqm	230
3	Wall tiling in toilet	2nd Floor	Sqm	546
4	Glass and Glazing	2nd Floor	Sqm	715
5	Pavit Tiling on Ramps	Common area	Sqm	800
6	Windows Glazing	Back side	Sqm	150
7	Wooden work/Wall paneling	Common area	Sqm	400
8	Painting	common area	Sqm	6000

Quantum of Balance Block A Civil (2nd Floor Onwards)

S.NO.	Activity	Description	Unit	Balance Quantity
E.	Fourth_floor			
1	Brick work	Walls , audi steps	cum	1100
2	Plaster	Walls	Sqm	5000
3	Flooring	only common area	Sqm	4900
4	False ceiling	only common area	Sqm	4200
5	Toilet Flooring	only common area	Sqm	530
6	Wall tiling in toilet	only common area	Sqm	1300

Quantum of Balance Block A MEP (2nd Floor Onwards)

S.No.	Activity	Description	Balance Quantity
1	Plumbing work	Users Requirement awaited	100%
2	Firefighting Work		100%
3	HVAC Work (Chiller, Pumps, expansion tank, AW & Piping Available)		50%
4	Electrical Work (Transformers, HT Panel & LT panel Available)		50%

Quantum of Balance Block A MEP (2nd Floor Onwards)

S.No.	Activity	Description	Balance Quantity
5	Lifts & Escalators (100% material available at site)	Installation Work	50%
6	DG Works (Cooling Towers Installed)	DGs to be procured	80%
7	BMS, Fire alarm,CCTV and PA	Users Requirement awaited	100%
8	STP / WTP	Testing & Commissioning	10%
9	Signage		100%

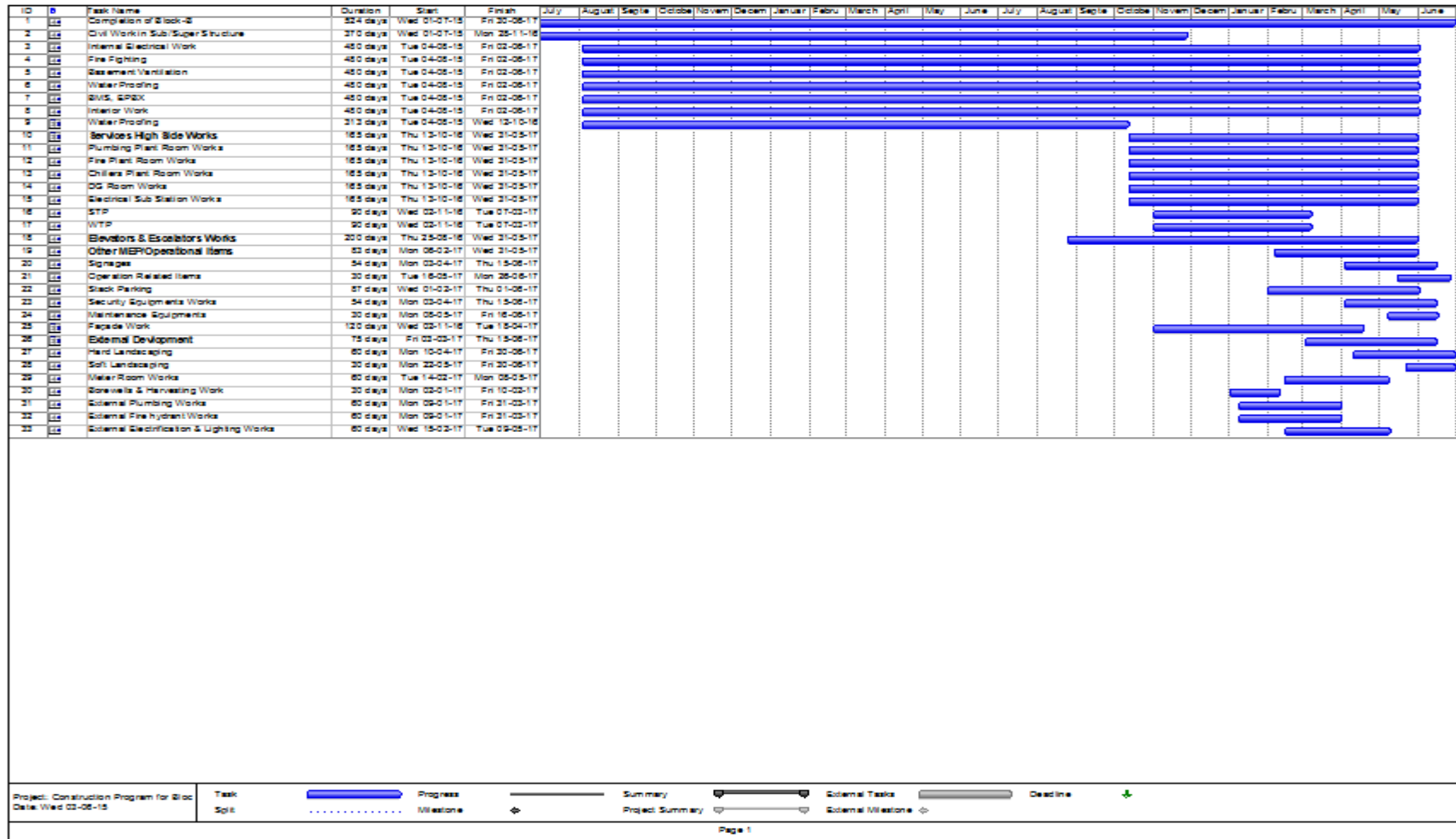
Methodology For Completion of Balance Block A (2nd Floor Onwards)

- Interfacing between special agencies is to be established
- Labor Deployment will be separate for Balance Block A, It will not be mixed up with ISBT
- Both the work of ISBT and Balance Block A will be taken up at same time and resources will be separate.
- We will bifurcate the area in two halves and activities such as Low end MEP works on respective floors will be taken up first and will be handed over to the other agencies.
- Brick work and plaster is independent activities will be carried independently
- Flooring/Tiling is to be carried in parallel

Methodology For Completion of Balance Block A (2nd Floor Onwards)

- MEP works such as firefighting, Electrical work, HVAC works, , Plumbing, work are to be coordinated /interfaced between different agencies in a better manner . This area is of 3rd Floor where coordination is to established between different agencies with more proactive and diligence manner which can be done by dividing the area in two halves , completing the MEP activities such as testing and commissioning of one half first , paving the way for false ceiling agencies .
- Elevators / Escalators are altogether indecent and can be taken in parallel
- BMS is also independent activities and will taken up parallel
- Painting of exteriors / interior two coats will be complete, final coat will be applied in the last
- Work to be planned in such a way that it does not interfere with ISBT operation

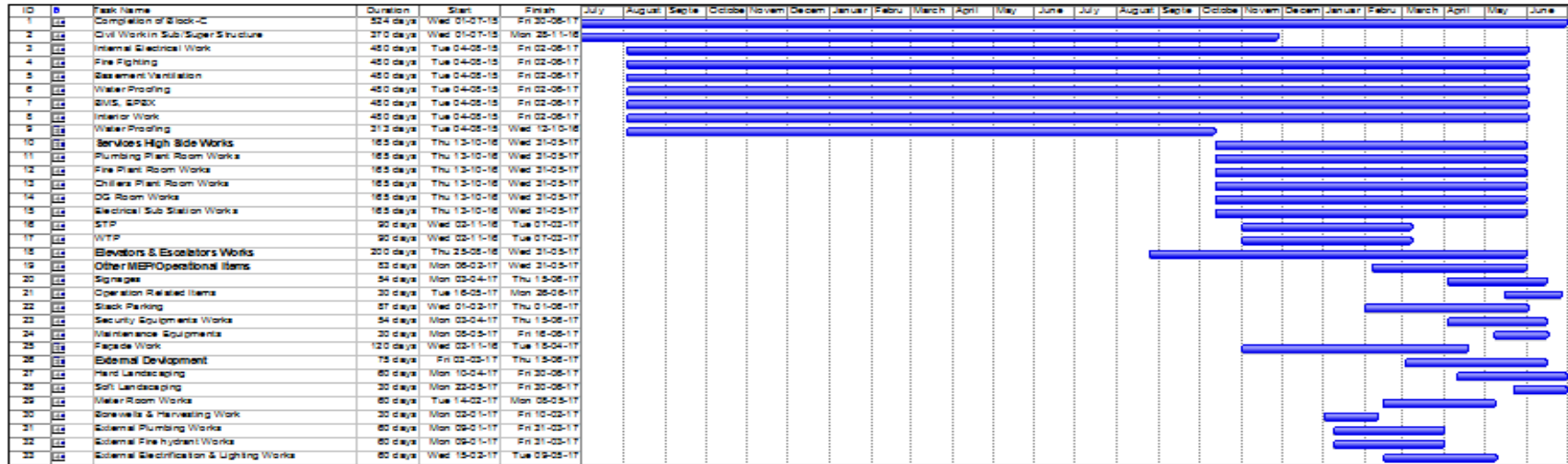
Construction Programme of Block B



Methodology For Construction of Block B and C

- Bore well point system, with complete dewatering system will be deployed towards Block B, parallel to NH side and Tip of C Block to make the area dry
- Foundation in the balance area will be completed on Top priority
- Parallel teams and parallel resources will be deployed for both B&C Block
- Top priority has been planned to complete the RCC work up to Ground floor, so that back filling could be completed all around Block C and B which will add to the more area for working, a better approach to site and above all removal of dewatering system
- Separate shuttering sets / scaffolds material (two and half sets of about 2500 Sqm for each block has been considered.
- Once the structure work up to GF is complete, the Hollow Concrete block work has been taken in planning.
- MEP work and finishing work will also be taken by establishing a striking balance between different agencies .

Construction Programme of Block C



Project: Construction Program for Bloc
Date: Wed 03-06-15

Task



Progress



Summary



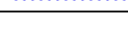
External Tasks



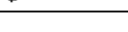
Deadline



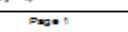
Split



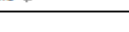
Milestone



Project Summary



External Milestone





Thank You

Front Elevation



Side Elevation



Side Elevation



GF ISBT



GF ISBT



GF ISBT



GF ISBT



GF ISB I



FFISDI



FFISDI



FF ISDI



FF ISBT



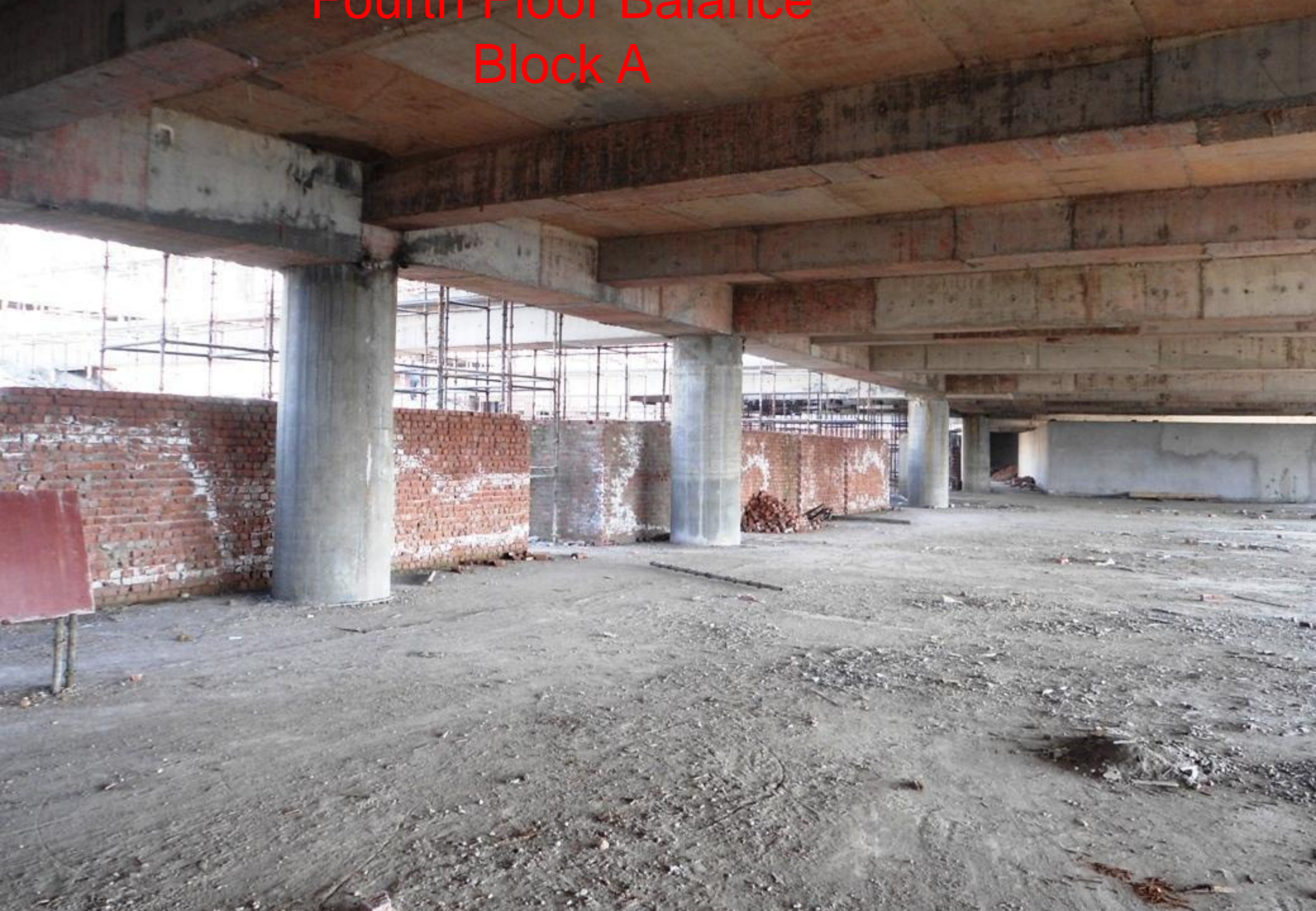
SF Balance Block A



IF Balance Block A



Fourth Floor Balcony Block A



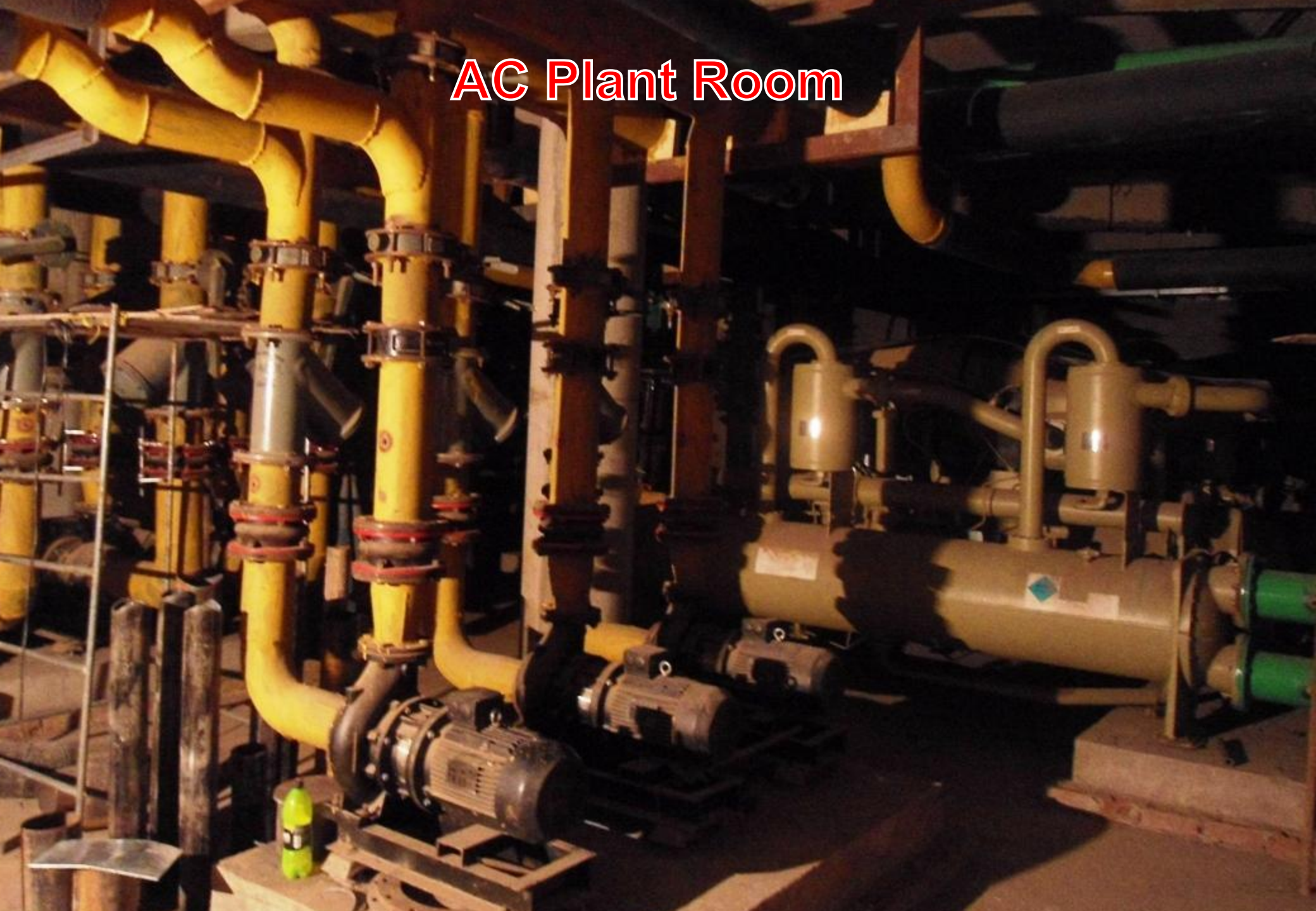
Fourth Floor Balcony
Block A



Fourth Floor Balance Block A



AC Plant Room



Air Handling Unit



Air Handling Unit



Escalators



Lift Material



Water Treatment Plant



Sewerage Treatment Plant



Substation

