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Conventional Structure Vs Ladderblock Comparison

ID	Description	Unit	Schedule of Quantities Qty	AFC Conventional Structure		ID	Description	Unit	Quantity	Rate	Amount (AED) as of 31/Aug/2007	
				Escalated Rate as of 31/Aug/2007	AFC Contract Amount as of 31/Aug/2007							
Ladderblock System												
ELEMENT 201 FRAME												
Columns: Basements												
1	60Mpa concrete to basement columns	m3	373	402.73	150,219.24	1	60Mpa Concrete to super columns	m3	486.54	402.73	195,944.29	
2	Formwork to basement columns	m2	2,271	97.41	221,229.24	2	Formwork to super columns (See note 1)	m2	3,888.47	120.00	466,615.80	
3	Reinforcement to basement columns	t	55	3,391.01	186,505.80	3	Reinforcement to super columns (including all laps/links etc.)	t	145.96	3,391.01	494,956.21	
Ground Level - Level L17 (incl. external columns)												
4	60Mpa concrete to columns	m3	1,670	402.73	672,563.36	4	Ladderblock Columns (B4 - L17)	No	22	3,069.00	67,518.00	
5	50Mpa concrete to columns	m3	622	399.22	248,315.68	4	COLUMN 800XVAR (2700-9200)	No	22	3,069.00	67,518.00	
6	40Mpa concrete to columns	m3	938	389.87	365,696.75		FRAMES					
7	Regular formwork to columns	m2	929	97.41	90,498.44		Ladderblock Frames (B4-L17)	No	49	12,688.00	621,712.00	
8	Circular formwork to columns	m2	2,380	112.43	267,587.09	1	FRAME F M-CC 18000X3000H	No	25	10,678.00	266,950.00	
9	Reinforcement to columns	t	348	3,391.01	1,180,073.06	2	FRAME F M-CC 18000X3000H - CUT	No	147	11,714.00	1,721,958.00	
ELEMENT 202 UPPER FLOORS												
Note: All below slabs and beams are P/T combined with regular reinforcement												
Basements												
1	45Mpa Concrete to internal suspended floor slab & beams - Basement 3	m3	1,755	393.34	690,308.19	3	FRAME M-CC 18000X3000H	No	36	16,516.00	594,576.00	
2	45Mpa Concrete to internal suspended floor slab & beams - Basement 2	m3	1,735	393.34	682,441.43	5	FRAME M-CC 18000X3900H - CUT	No	351	13,909.00	4,882,059.00	
3	45Mpa Concrete to internal suspended floor slab & beams - Basement 1 (including below external landscaped/parking area)	m3	1,850	393.34	727,675.30	7	FRAME M-CC 18000X4000H	No	12	16,648.00	199,776.00	
4	Reinforcement to basement slabs	t	150	3,391.01	508,652.18	8	FRAME M-CC 18000X4000H - CUT	No	38	14,013.00	532,494.00	
5	Reinforcement to basement beams	t	63	3,391.01	213,633.92	9	FRAME M-CC 18000X5500H	No	12	18,744.00	224,928.00	
6	Post tensioning to basement slabs	t	83	16,972.81	1,408,742.93	10	FRAME M-CC 18000X5500H - CUT	No	39	15,787.00	615,693.00	
7	Post tensioning to basement beams	t	39	16,972.81	661,939.45		SPACERS					
							Ladderblock Spacers (B4-L17)	No	30	3,912.00	117,360.00	
							SPACER F M9000X3000H	No	30	3,912.00	117,360.00	



Conventional Structure Vs Ladderblock Comparison										
Conventional Structure					Ladderblock System					
ID	Description	Unit	Schedule of Quantities Qty	Escalated Rate as of 31/Aug/2007	AFC Contract Amount as of 31/Aug/2007	Description	Unit	Quantity	Rate	Amount (AED) as of 31/Aug/2007
8	E/O for post tensioning to basement1 beams below landscaped area	t	7	16,972.81	118,809.64					
9	Formwork to basements 1-3 suspended slabs and beams	m2	38,971	98.71	3,846,854.69	2	No	90	4,641.00	417,690.00
						3	No	18	5,966.00	107,388.00
						4	No	126	5,647.00	711,522.00
						5	No	20	5,700.00	114,000.00
						6	No	2	6,573.00	13,146.00
1	Ground Level - Level 17. 45Mpa concrete to suspended floor slabs & beams.	m3	1,450	393.34	570,340.10					
2	Internal RC floor slab - Ground Level	m3	619	393.34	243,476.22					
3	Internal RC floor slab - Level 1	m3	831	393.34	326,863.88					
4	Internal RC floor slab - Level 2	m3	849	393.34	333,943.96					
5	Internal RC floor slab - Level 3	m3	857	393.34	337,090.67					
6	Internal RC floor slab - Level 4	m3	854	393.34	335,910.65					
7	Internal RC floor slab - Level 5	m3	436	393.34	171,495.37					
8	Internal RC floor slab - Level 6	m3	3,927	393.34	1,544,638.33					
9	Internal RC floor slab - Level 7 - 15	m3	436	393.34	171,495.37					
10	Internal RC floor slab - Level 16	m3	233	393.34	91,647.75					
						1	No	1230	250.00	307,500.00
						1	Item			448,440.00
						1	Item			13,687,208.00
						1	Item			1,319,728.00



Conventional Structure Vs Ladderblock Comparison

		Conventional Structure				Ladderblock System					
ID	Description	Unit	Schedule of Quantities Qty	AFC Conventional Structure		ID	Description	Unit	Quantity	Rate	Amount (AED) as of 31/Aug/2007
				Escalated Rate as of 31/Aug/2007	AFC Contract Amount as of 31/Aug/2007						
11	Reinforcement to ground floor suspended slab	t	59	3,391.01	200,069.86						
12	Reinforcement to levels 1-16 suspended slabs	t	247	3,391.01	837,580.59	1	CORE SLAB & BEAMS (INSITU CONCRETE) 45Mpa concrete to lift core slabs	m3	41.48	393.34	16,314.87
13	Reinforcement to level 17 suspended slab	t	8	3,391.01	27,128.12	2	Internal RC floor slabs to basements 3, 2 & 1	m3	150.08	393.34	59,030.20
14	Reinforcement to ground floor regular beams	t	3	3,391.01	10,173.04	3	Internal RC floor slabs GF - L17	t	1.04	3,391.01	3,516.31
15	Reinforcement to ground floor transfer beams	t	33	3,391.01	111,903.48	4	Reinforcement to Basement suspended slabs 3, 2 & 1	t	4.95	3,391.01	16,793.91
16	Reinforcement to levels 1-16 beams	t	162	3,391.01	549,344.36	5	Reinforcement to internal floor slabs GF-L17	t	1.16	16,972.81	19,636.69
17	Reinforcement to level 17 beams	t	5	3,391.01	16,955.07	6	Post tensioning to basement slabs	t	3.20	16,972.81	54,228.88
18	Post tensioning to ground floor slab	t	24	16,972.81	407,347.35	7	Post tensioning to slabs GF-L17	m2	253.47	69.61	17,643.10
19	Post tensioning to levels 1-17 slabs	t	102	16,972.81	1,731,226.25	8	Formwork to basement slabs	m2	866.39	69.61	60,306.45
20	Post tensioning to GF beams	t	1	16,972.81	16,972.81	9	Formwork to internal RC slabs GF-L17 45Mpa concrete to lift core beams	m3	31.73	393.34	12,478.65
21	Post tensioning to GF transfer beams	t	11	16,972.81	186,700.87	10	Internal RC beams GF-L17	t	1.46	3,391.01	4,948.68
22	Post tensioning to levels 1-17 beams	t	103	16,972.81	1,748,199.06	11	Reinforcement to internal RC beams GF-L17	t	0.50	16,972.81	8,432.09
23	Formwork to GF-Level 17 suspended slabs	m2	96,404	6,710,321.82	6,710,321.82		Post tensioning to internal beams GF-L17				
ELEMENT 203 ROOF											
1	RC roof to plant room (level 17) 45mpa concrete	m3	216	393.34	84,961.01	1	Formwork to lift shaft walls (See note 1)	m2	17,399	135.00	2,348,865.00
2	Reinforcement to roof slab	t	7	3,391.01	23,737.10						
3	Reinforcement to roof beams	t	5	3,391.01	16,955.07						
4	Post tensioning to roof slab	t	3	16,972.81	50,918.42						
5	Post tensioning to roof beams	t	1	16,972.81	16,972.81						
6	Formwork to level 17 roof slab	m2	1,138	164.86	187,609.77						



Project: Dubai Festival City
 Package: Zone 3 - Building 02F
 Structure Element Cost Comparison

Conventional Structure Vs Ladderblock Comparison

Conventional Structure				Ladderblock System							
ID	Description	Unit	Schedule of Quantities Qty	Escalated Rate as of 31/Aug/2007	AFC Contract Amount as of 31/Aug/2007	Description	Unit	Quantity	Rate	Amount (AED) as of 31/Aug/2007	
											COST PER M2 ANALYSIS
Construction Method		M2		Total Cost.m2							
	AFC Conventional Structure	31,599,742.83	49,151	642.91						(1,378,984.00)	
	Ladderblock System	28,817,073.13	49,151	586.30						(1,297,950.00)	
	SUB-TOTAL				31,599,742.83					31,494,007.13	
						ADDITIONAL ITEMS:					
						Anticipated saving on Preliminaries: (see note 3)					
						General Prelims					
						Staff Prelims					
						Total Estimated Ladderblock Cost				28,817,073.13	
						Total Potential Saving for using Ladderblock				2,782,669.70	

NOTES:

- Note 1 Increased rate as more complex formwork system including scaffolding will be required. Erection timing etc. will also be disjointed
- Note 2 Figure taken from Icon cost plan
- Note 3 Prelims based on a 2month saving, taken as weeks 36 to 44 of the 04F programme.

CLARIFICATIONS, ASSUMPTIONS AND EXCLUSIONS

- All prices have been escalated to reflect rates as of August 31st 2007.
- It has been assumed that Piling will remain the same as building 04F therefore no cost adjustment has been made.
- It has been agreed that the Basement 4 ground slab will remain the same as Building 04F, therefore the ICON quantity of 42no Long Floor Blocks (LFB) for this level has been deleted from the ICON cost plan for comparison purposes.
- It has been assumed that the Engineering Fee figure provided by ICON for all project specific design requirements is correct and has been included as a line item in the cost comparison.

- All technical information provided by ICON relating to the make-up of the Ladderblock system including quantity of material to produce the pre-cast units, quantity of each of the Spacers, Frames, Columns, LFBs, and all associated miscellaneous materials to be correct.
- All transportation, loading and erection calculations provided are assumed to be correct.
- The saving for Preliminary items have been assumed to be 2 full months. Based on the current construction programme for building 04F this time has been taken as weeks 36-44 (May & June '08) of the project.
- Cranage has been assumed to be the same requirement as Building 04F and the subsequent potential preliminary savings have been based on this assumption.
- In lieu of more explicit design information, formwork rates have been adjusted to represent a revised formwork system to both the 'super columns' and lift shaft walls reflecting a more disjointed construction method than would have previously been required.
- The material quantities for the super columns have been calculated based on the design information provided by ICON (David Powell email, dated 19th Nov 2007) relating to number of columns per level etc.
- Any items that do not appear on the 'cost comparison' sheet have been assumed to be the same as Building 04F therefore no cost adjustment has been made.

DUBAI FESTIVAL CITY
BUILDING 02F
DUE DILIGENCE

- We have excluded any main contractor's overhead and profit associated with the Ladderblock system.
- For the cost per m2 comparison the area has been taken as 49,151m2 as per the 04f tender documents.
- The slab and beam quantities to the in-situ core have been re-measured and extracted from the 04F BOQ to enable a true comparison to be conducted.

Total - For All Sections

M2 52,178 SF 561,636.77 USD
BLOCK AED

	Unit Price	QTY	Extended Price	Extended Price	Delivery - Number of # of Parts / Truck Loads
FRAME F M-CC 18000X3000H	12,688.00	49	621,712.00	168,943.48	3 16.3
FRAME F M-CC 18000X3000H - CUT	10,678.00	25	266,950.00	72,540.76	3 8.3
FRAME M-CC 18000X3000H	11,714.00	147	1,721,958.00	467,923.37	3 49
FRAME M-CC 18000X3000H - CUT	9,902.00	75	742,650.00	201,807.07	4 18.8
FRAME M-CC 18000X3900H	16,516.00	36	594,576.00	161,569.57	2 18
FRAME M-CC 18000X3900H - CUT	13,909.00	351	4,882,059.00	1,326,646.47	2 175.5
FRAME M-CC 18000X4000H	16,648.00	12	199,776.00	54,286.96	2 6
FRAME M-CC 18000X4000H - CUT	14,013.00	38	532,494.00	144,699.46	2 19
FRAME M-CC 18000X5500H	18,744.00	12	224,928.00	61,121.74	2 6
FRAME M-CC 18000X5500H - CUT	15,787.00	39	615,693.00	167,307.88	2 19.5
COLUMN 800XVAR (2700-9200)	3,069.00	22	67,518.00	18,347.28	15 1.5
SUPER COLUMN	-	480	-	-	-
SPACER F M9000X3000H	3,912.00	30	117,360.00	31,891.30	7 4.3
SPACER M9000X3000H	4,641.00	90	417,690.00	113,502.72	6 15
SPACER M9000X3000H5500	5,966.00	18	107,388.00	29,181.52	5 3.6
SPACER M9000X3900H	5,647.00	126	711,522.00	193,348.37	5 25.2
SPACER M9000X4000H	5,700.00	20	114,000.00	30,978.26	5 4
SPACER M9000X5500H	6,573.00	2	13,146.00	3,572.28	4 0.5
LFB 3000X9000-DAP	8,152.00	1679	13,687,208.00	3,719,350.00	2 839.5
Subtotal			25,638,628.00	6,967,018.48	Number of truckloads rounded 1230
Erection			448,440.00	121,858.70	Price / Truckload 250
Delivery	250.00	1230	307,500.00	83,559.78	
Subtotal Erection and Delivery			755,940.00	205,418.48	
Engineering Fee	5%		1,319,728.00	358,621.74	
Total Price LadderBlock and Services price / square meter - AED			27,714,296.00	7,531,058.70	66.55327 SM / Frame Block
price / square foot - USD			531.15	13.41	

Assumptions on cost / unit

TTS-PKP ADJUSTMENT											
	Rates at July 07	Escalation @ 8.75% per anum	Rates at Aug 07		This table is used as the basis for the material costs in the part item detail tab.						Back Check USD
Concrete cost	321.02	2.34	323.36	/cubic met							
reinforcing steel costs	2.51	0.02	2.53	/KG							
Pipe Sleeve cost	12.76	0.09	12.85	/Meter							
150 mm dia sleeve	74.49	0.54	75.03	/Meter							
lthreaded rod	17.29	0.13	17.42	/meter							
nuts	1.00	0.01	1.01	/unit	Unigue pieces that make up assembly						
washers	0.30	0.00	0.30	Total Length	Length of pipe sleeves						
200dblcrossesx800 - frame	15.31		15.42	1,200.00	200	200	800				4.19
Mallet	18.73		18.86	300.00	300						5.13
tri-mallet	29.57		29.79	1,150.00	400	400	350				8.09
garage cross	10.21		10.28	800.00	200	600					2.79
std dbl beam cross	17.86		17.99	1,400.00	200	200	1000				4.89
spacer column crosses	8.93		9.00	700.00	200	500					2.44
200 mm sleeve	2.55		2.57	200.00	200						0.70
300 mm sleeve	3.83		3.86	300.00	300						1.05
Threaded rod assembly	17.03		17.03	13.83	1	1.00	0.30	0.30	0.30	0.30	4.63
Foam Concrete	267.47	1.95	269.42								

Assumptions from Al Futtaim - July Margin	Framing 50%	Floor 40%	Beams 30%
Standard Material Costs / Al Futtaim			
Material Costs	AED		AED
Foam Concrete	262.42		267.47
Concrete	314.60	cubic meter	321.02
Rebar	2.430	/kg	2.51
Pipe Sleeves	12.60	/meter	12.76
Galvanized Threaded Rod	16.60	/meter	17.29
Nuts	1.00	/each	1.01
Hardened Washers	0.30	/each	0.30
6" Pipe sleeves	73.00	/meter	74.49
Bearing material	26.30	/meter	26.77
Raw labor	Base amount		
Skilled Production Worker Salary	14.00	/hour	3.00
Average Laborer Salary	10.00		2.72
Average World worker	12.00		3.26
Supervisor	30.00		6.16
Overhead	30%		

Conversion factors table		
1 cubic yard =	0.764555	CM
1 cubic meter =	1.307951	CY
1 meter =	3.28084	FT
Square meter =	10.76391	SF
1 KG =	2.204623	pounds
1 PSI =	6894.757	Pascal

Concrete price increase:	10%

Price / Unit	Quantity	Total	Unit Price	Total
970.00				
575.00				

Assumes worst cast scenario for the steel

Erection Section	Basement	Podium	Tower
Minutes Per Part / Level			
Frame	18	16	22
Floor	16	6	12



Building 02F - Due Diligence
TTS-PKP Super Column Take-Off

Drg / no	COLUMN TYPE	SIZE				COLUMNS					COLUMN HEIGHT (m)	COUNT	TOTAL HEIGHT (m)	TOTAL VOLUME (m³)		
		L	B	B4-B1	G	L1-L3	L4	LS-12								
	A	0.300	0.800	2.200		32						32	3.00	23.04	211.20	6.91
	A	0.300	0.800	2.200			8					8	5.50	10.56	96.80	3.17
	A	0.300	0.800	2.200				24				24	3.85	22.18	203.28	6.65
	A	0.300	0.800	2.200					8			8	4.00	7.68	70.40	2.30
	A	0.300	0.800	2.200						64		64	3.85	59.14	542.08	17.74
	B	0.600	0.800	2.800		12						12	3.00	17.28	100.80	5.18
	B	0.600	0.800	2.800			3					3	5.50	7.92	46.20	2.38
	B	0.600	0.800	2.800				9				9	3.85	16.63	97.02	4.99
	B	0.600	0.800	2.800					3			3	4.00	5.76	33.60	1.73
	B	0.600	0.800	2.800						24		24	3.85	44.35	258.72	13.31
	C-C1	0.350	0.800	2.300		4						4	3.00	3.36	27.60	1.01
	C-C1	0.350	0.800	2.300			1					1	5.50	1.54	12.95	0.46
	C-C1	0.350	0.800	2.300				3				3	3.85	3.23	26.57	0.97
	C-C1	0.350	0.800	2.300					1			1	4.00	1.12	9.20	0.34
	C-C1	0.350	0.800	2.300						8		8	3.85	8.62	70.84	2.59
	C-C2	0.350	0.800	2.300		4						4	3.00	3.36	27.60	1.01
	C-C2	0.350	0.800	2.300			1					1	5.50	1.54	12.65	0.46
	C-C2	0.350	0.800	2.300				3				3	3.85	3.23	26.57	0.97
	C-C2	0.350	0.800	2.300					1			1	4.00	1.12	9.20	0.34
	C-C2	0.350	0.800	2.300						8		8	3.85	8.62	70.84	2.59
	D-C1	0.250	0.800	2.100		20						20	3.00	12.00	126.00	3.60
	D-C1	0.250	0.800	2.100			5					5	5.50	5.50	57.75	1.65
	D-C1	0.250	0.800	2.100				15				15	3.85	11.55	121.28	3.47
	D-C1	0.250	0.800	2.100					5			5	4.00	4.00	42.00	1.20
	D-C1	0.250	0.800	2.100						40		40	3.85	30.80	323.40	9.24
	D-C2	0.500	0.600	2.200		20						20	3.00	18.00	132.00	5.40
	D-C2	0.500	0.600	2.200			5					5	5.50	8.25	60.50	2.48
	D-C2	0.500	0.600	2.200				15				15	3.85	17.33	127.05	5.20
	D-C2	0.500	0.600	2.200					5			5	4.00	6.00	44.00	1.80
	D-C2	0.500	0.600	2.200						40		40	3.85	46.20	338.80	13.86
	E	0.500	0.600	2.200		16						16	3.00	14.40	105.60	4.32
	E	0.500	0.600	2.200			4					4	5.50	6.60	48.40	1.98
	E	0.500	0.600	2.200				12				12	3.85	13.86	101.64	4.16
	E	0.500	0.600	2.200					4			4	4.00	4.80	35.20	1.44
	E	0.500	0.600	2.200						32		32	3.85	36.96	271.04	11.09
TOTAL														486.54	3,888.47	145.96

O4F CORE SLAB AND BEAM TAKE-OFF SUMMARY			
Item No.	Description	Unit	Qty
1.0	Basement RC Slab Concrete	m ³	41.48
2.0	Reinforcement to Basement RC Slabs	t	1.04
3.0	Formwork to Basement RC Slabs	m ²	253.47
4.0	GF - L17 RC Slab Concrete	m ³	150.08
5.0	GF - L17 Rebar to RC Slabs	t	4.95
6.0	GF - L17 Formwork to RC Slabs	m ²	866.39
7.0	PT to Basement Slabs	t	1.16
8.0	GF - L17 PT to Slabs	t	3.20
9.0	GF - L17 Concrete to RC Beams	m ³	31.73
10.0	GF - L17 Rebar to RC Beams	t	1.46
11.0	GF - L17 Formwork to RC Beams	m ²	330.50
12.0	GF - L17 PT Beams	m ²	54.00
13.0	GF - L17 Rebar to PT Beams	t	0.50

Measurement Sheet

Project BUILDING 04f - Core Slab & Beam Extraction from BOQ
Concrete Slabs & Beams Between Lift Cores

Take of by **ROSHAN**



Contract No.

Dubai Festival City

Sheet No : 1 of 7

Item No.	Description	Ref.	Nr	Length	Breadth	Height	Quantity	Total	Unit
1.0	RC Slab Measure - Concrete								
	Basement 3								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Basement 2								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Basement 1								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)	41.48	m ³
	Ground Floor								
	170mm thk. RC Slabs to Lift lobbies			8.70	7.60	0.17	11.24		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.17	(4.95)		m ³
	450mm thk. RC Slabs to Lift lobbies			9.00	9.20	0.45	37.26		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.45	(21.17)		m ³
	Level 1								
	200mm thk. Rc Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Level 2								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Level 3								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Level 4								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Level 5								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70	0.20	29.06		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	<i>ddt Voids</i>	-2		2.80	5.20	0.20	(5.82)		m ³
	Level 6								
	200mm thk. RC Slabs to Lift lobbies			8.70	8.20	0.20	14.27		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	Level 7 - 15								
	200mm thk. RC Slabs to Lift lobbies		9	8.70	8.20	0.20	128.41		m ³
	<i>ddt Voids</i>	-2	9	2.80	8.40	0.20	(84.67)		m ³

Measurement Sheet

Project **BUILDING 04f - Core Slab & Beam Extraction from BOQ**

Take of by **ROSHAN**



Concrete Slabs & Beams Between Lift Cores

Contract No.

Dubai Festival City

Sheet No : 2 of 7

Item No.	Description	Ref.	Nr	Length	Breadth	Height	Quantity	Total	Unit
	Level 16								
	200mm thk. RC Slabs to Lift lobbies			8.70	8.20	0.20	14.27		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.20	(9.41)		m ³
	Level 17 Roof Plan								
	210mm thk. RC Slabs to Lift lobbies			8.70	8.20	0.21	14.98		m ³
	<i>ddt Voids</i>	-2		2.80	8.40	0.21	(9.88)	150.08	m ³
	TOTAL CONCRETE FOR RC SLABS							191.55	m ³
2.0	PT Slab Measure								
	Basement 3								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Basement 2								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Basement 1								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)	231.39	m ²
	Ground Floor								
	170mm thk. PT Slabs to Lift lobbies			8.70	7.60		66.12		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	450mm thk. PT Slabs to Lift lobbies			9.00	9.20		82.80		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	Level 1								
	200mm thk. PT Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Level 2								
	200mm thk. PT Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Level 3								
	200mm thk. PT Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Level 4								
	200mm thk. PT Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Level 5								
	200mm thk. PT Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²

Measurement Sheet

Project **BUILDING 04f - Core Slab & Beam Extraction from BOQ**

Take of by **ROSHAN**



Concrete Slabs & Beams Between Lift Cores

Contract No.

Dubai Festival City

Sheet No : 3 of 7

Item No.	Description	Ref.	Nr	Length	Breadth	Height	Quantity	Total	Unit
	Level 6								
	200mm thk. PT Slabs to Lift lobbies			8.70	8.20		71.34		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	Level 7 - 15								
	200mm thk. PT Slabs to Lift lobbies		9	8.70	8.20		642.06		m ²
	<i>ddt Voids</i>	-2	9	2.80	8.40		(423.36)		m ²
	Level 16								
	200mm thk. PT Slabs to Lift lobbies			8.70	8.20		71.34		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	Level 17 Roof Plan								
	210mm thk. PT Slabs to Lift lobbies			8.70	8.20		71.34		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	TOTAL FOR PT SLABS							710.01	m ²
3.0	Formwork Measure to RC Slabs								
	Basement 3								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	Slab Edges		8	2.80		0.20	4.48		m ²
	Slab Edges		4	8.40		0.20	6.72		m ²
	Slab Edges		4	5.20		0.20	4.16		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Basement 2								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	Slab Edges		8	2.80		0.20	4.48		m ²
	Slab Edges		4	8.40		0.20	6.72		m ²
	Slab Edges		4	5.20		0.20	4.16		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	Basement 1								
	200mm thk. RC Slabs to Lift lobbies			8.70	16.70		145.29		m ²
	Slab Edges		8	2.80		0.20	4.48		m ²
	Slab Edges		4	8.40		0.20	6.72		m ²
	Slab Edges		4	5.20		0.20	4.16		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)	253.47	m ²
	Ground Floor								
	170mm thk. PT Slabs to Lift lobbies			8.70	7.60		66.12		m ²
	Slab Edges		4	2.80		0.17	1.90		m ²
	Slab Edges		4	5.20		0.17	3.54		m ²
	<i>ddt Voids</i>	-2		2.80	5.20		(29.12)		m ²
	450mm thk. PT Slabs to Lift lobbies			9.00	9.20		82.80		m ²
	Slab Edges		4	2.80		0.45	5.04		m ²
	Slab Edges		4	8.40		0.45	15.12		m ²
	<i>ddt Voids</i>	-2		2.80	8.40		(47.04)		m ²
	Level 1								

Measurement Sheet

Project BUILDING 04f - Core Slab & Beam Extraction from BOQ

Take of by **ROSHAN**



Concrete Slabs & Beams Between Lift Cores

Contract No.

Dubai Festival City

Sheet No : 4 of 7

Item No.	Description	Ref.	Nr			Length	Breadth	Height	Quantity	Total	Unit
	200mm thk. Slabs to Lift lobbies					8.70	16.70		145.29		m ²
	Slab Edges			8		2.80		0.20	4.48		m ²
	Slab Edges			4		8.40		0.20	6.72		m ²
	Slab Edges			4		5.20		0.20	4.16		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	ddt Voids		-2			2.80	5.20		(29.12)		m ²
	Level 2										
	200mm thk. Slabs to Lift lobbies					8.70	16.70		145.29		m ²
	Slab Edges			8		2.80		0.20	4.48		m ²
	Slab Edges			4		8.40		0.20	6.72		m ²
	Slab Edges			4		5.20		0.20	4.16		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	ddt Voids		-2			2.80	5.20		(29.12)		m ²
	Level 3										
	200mm thk. Slabs to Lift lobbies					8.70	16.70		145.29		m ²
	Slab Edges			8		2.80		0.20	4.48		m ²
	Slab Edges			4		8.40		0.20	6.72		m ²
	Slab Edges			4		5.20		0.20	4.16		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	ddt Voids		-2			2.80	5.20		(29.12)		m ²
	Level 4										
	200mm thk. Slabs to Lift lobbies					8.70	16.70		145.29		m ²
	Slab Edges			8		2.80		0.20	4.48		m ²
	Slab Edges			4		8.40		0.20	6.72		m ²
	Slab Edges			4		5.20		0.20	4.16		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	ddt Voids		-2			2.80	5.20		(29.12)		m ²
	Level 5										
	200mm thk. Slabs to Lift lobbies					8.70	16.70		145.29		m ²
	Slab Edges			8		2.80		0.20	4.48		m ²
	Slab Edges			4		8.40		0.20	6.72		m ²
	Slab Edges			4		5.20		0.20	4.16		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	ddt Voids		-2			2.80	5.20		(29.12)		m ²
	Level 6										
	200mm thk. Slabs to Lift lobbies					8.70	8.20		71.34		m ²
	Slab Edges			2		2.80		0.20	1.12		m ²
	Slab Edges			2		8.40		0.20	3.36		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²
	Level 7 - 15										
	200mm thk. Slabs to Lift lobbies				9	8.70	8.20		642.06		m ²
	Slab Edges			9	2	2.80		0.20	10.08		m ²
	Slab Edges			9	2	8.40		0.20	30.24		m ²
	ddt Voids		-2		9	2.80	8.40		(423.36)		m ²
	Level 16										
	200mm thk. Slabs to Lift lobbies					8.70	8.20		71.34		m ²
	Slab Edges			2		2.80		0.20	1.12		m ²
	Slab Edges			2		8.40		0.20	3.36		m ²
	ddt Voids		-2			2.80	8.40		(47.04)		m ²

Measurement Sheet

Project BUILDING 04f - Core Slab & Beam Extraction from BOQ
Concrete Slabs & Beams Between Lift Cores

Take of by **ROSHAN**



Contract No.

Dubai Festival City

Sheet No : 5 of 7

Item No.	Description	Ref.	Nr	Length	Breadth	Height	Quantity	Total	Unit
	Level 17 Roof Plan								
	210mm thk. Slabs to Lift lobbies			8.70	8.20		71.34		m ²
	Slab Edges		2	2.80		0.21	1.18		m ²
	Slab Edges		2	8.40		0.21	3.53		m ²
	ddt Voids	-2		2.80	8.40		(47.04)		m ²
	TOTAL FORMWORK FOR SLABS							866.39	m²
4.0	REINFORCEMENT TO SLABS								
	Basement Slabs								
	RC Slab Between lift cores (25 Kg/m3)								t
	PT Slab Between lift cores (5 Kg/m2)							1.16	t
	Ground Floor to L-17								
	RC Slab Between lift cores (33 Kg/m3)							4.95	t
	PT Slab Between lift cores (4.5 Kg/m2)							3.20	t
5.0	RC Beam Measure - Concrete								
	Ground Floor								
	800 x 300		3	3.00	0.30	0.35	0.95		m ³
	Level 1								
	800 x 300		7	3.00	0.30	0.60	3.78		m ³
	Level 2								
	800 x 300		7	3.00	0.30	0.60	3.78		m ³
	Level 3								
	800 x 300		7	3.00	0.30	0.60	3.78		m ³
	Level 4								
	800 x 300		7	3.00	0.30	0.60	3.78		m ³
	Level 5								
	800 x 300		7	3.00	0.30	0.60	3.78		m ³
	Level 6								
	800 x 300		2	3.00	0.30	0.60	1.08		m ³
	Level 7 - 15								
	800 x 300		9	2	3.00	0.30	9.72		m ³
	Level 16								
	800 x 300		2	3.00	0.30	0.60	1.08		m ³
	TOTAL CONCRETE FOR RC BEAMS							31.73	m³
6.0	PT Beam Measure								
	Ground Floor								

Measurement Sheet

Project **BUILDING 04f - Core Slab & Beam Extraction from BOQ**

Take of by **ROSHAN**



Concrete Slabs & Beams Between Lift Cores

Contract No.

Dubai Festival City

Sheet No : 6 of 7

Item No.	Description	Ref.	Nr		Length	Breadth	Height	Quantity	Total	Unit
	800 x 300			3	3.00	0.30		2.70		m ²
	Level 1									
	800 x 300			7	3.00	0.30		6.30		m ²
	Level 2									
	800 x 300			7	3.00	0.30		6.30		m ²
	Level 3									
	800 x 300			7	3.00	0.30		6.30		m ²
	Level 4									
	800 x 300			7	3.00	0.30		6.30		m ²
	Level 5									
	800 x 300			7	3.00	0.30		6.30		m ²
	Level 6									
	800 x 300			2	3.00	0.30		1.80		m ²
	Level 7 - 15									
	800 x 300		9	2	3.00	0.30		16.20		m ²
	Level 16									
	800 x 300			2	3.00	0.30		1.80		m ²
	TOTAL PT BEAMS								54.00	m²
7.0	Formwork Measure to RC Beams									
	Ground Floor									
	800 x 300		2	3	3.00		0.35	6.30		m ²
				3	3.00	0.30		2.70		m ²
	Level 1									
	800 x 300		2	7	3.00		0.60	25.20		m ²
				7	3.00	0.30		6.30		m ²
	Level 2									
	800 x 300		2	7	3.00		0.60	25.20		m ²
				7	3.00	0.30		6.30		m ²
	Level 3									
	800 x 300		2	7	3.00		0.60	25.20		m ²
				7	3.00	0.30		6.30		m ²
	Level 4									
	800 x 300		2	7	3.00		0.60	25.20		m ²
				7	3.00	0.30		6.30		m ²
	Level 5									
	800 x 300		2	7	3.00		0.60	25.20		m ²
				7	3.00	0.30		6.30		m ²
	Level 6									
	800 x 300		2	2	3.00		0.60	7.20		m ²
				2	3.00	0.30		1.80		m ²
	Level 7 - 15									
	800 x 300		2	9	2	3.00	0.60	64.80		m ²
				9	2	3.00	0.30	16.20		m ²
	Level 16									
	800 x 300		2	2	3.00		0.60	7.20		m ²
				2	3.00	0.30		1.80		m ²

Measurement Sheet

Project BUILDING 04f - Core Slab & Beam Extraction from BOQ
 Concrete Slabs & Beams Between Lift Cores

Take of by **ROSHAN**



Contract No.

Dubai Festival City

Sheet No : 7 of 7

Item No.	Description	Ref.	Nr				Length	Breadth	Height	Quantity	Total	Unit
	TOTAL FORMWORK FOR BEAMS										330.50	m²
8.0	REINFORCEMENT TO RC BEAMS (46 Kg/m3)										1.46	t
9.0	REINFORCEMENT TO PT BEAMS (9.2 Kg/m2)										0.50	t