

	DATA TEKNIS PROYEK		Nomor
			Halaman
			Tanggal
BIRO ENGINEERING	APARTMENT		


NAMA PROYEK	: PODOMORO CITY DELI MEDAN
PEMILIK	: PT SINAR MENARA DELI (AGUNG PODOMORO LAND)
JENIS PROYEK	: APARTMENT, OFFICE, HOTEL, MALL & PARKING AREA (SUPER BLOK)
LOKASI	: JALAN PUTRI HIJAU, MEDAN, SUMATERA UTARA
PERIODE PELAKSANAAN	: 2013 s/d 2021


4	ELEKTRIKAL			
4,1	DATA DAYA UTAMA	KAPASITAS	SATUAN	KETERANGAN
	Besaran Daya Total	: 5540	KVA	Daya PLN Tersambung
	Listrik Total untuk Penerangan	: 312	KVA	Trafo 2000 KVA = 1 Unit
	Listrik Total untuk Stop Kontak	: 4725	KVA	Sambungan PLN = 5540 KVA
	Listrik Total untuk Daya :			
	- VAC	: 96	KVA	
	- Lift	: 435	KVA	
	- Pompa-pompa	: 560	KVA	
	- FAN ( PAF & SEF )	: 94	KVA	
	Total	:	KVA	


DATA KEBUTUHAN DAYA								
4,2	Lighting / Penerangan & Stop kontak	MERK	TYPE	JUMLAH	JUMLAH DAYA (Watt)	SATUAN (Watt)	KETERANGAN	
I	Penerangan & STK lantai ground							
1	Tower Liberty							
	Down Light Led 10 W			42	10	420,0		
	Linear Led 10 W/ Meter			247	10	2470,0		
	TL TKO 1 x 18 W			21	18	378,0		
			Total Penerangan			3268,0		
	Stk Lantai 200 W / titik	Boss		5	200	1000,0		
	Stk dinding 200 W / titik	Boss		24	200	4800,0		
			Total Stk			5800,0		
2	Tower Linclon							
	Down Light Led 10 W			31	10	310,0		
	Linear Led 10 W/ Meter			218	10	2180,0		
	TL TKO 1 x 18 W			21	18	378,0		
			Total Penerangan			2868,0		
	Stk Lantai 200 W / titik	Boss		5	200	1000,0		
	Stk dinding 200 W / titik	Boss		12	200	2400,0		
			Total Stk			3400,0		


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3	Tower Lexington								
	Down Light Led 10 W				40	10	400,0		
	Linear Led 10 W/ Meter				179	10	1790,0		
	TL TKO 1 x 18 W				21	18	378,0		
				Total Penerangan			2568,0		
	Stk Lantai 200 W / titik			Boss	5	200	1000,0		
	Stk dinding 200 W / titik			Boss	19	200	3800,0		
				Total Stk			4800,0		
4	Drive way								
	DL-DW1 Led 20 W				32	20	640,0		
	DL-DW2 Led 30 W				110	30	3300,0		
	LL-DW1 14 W/ Meter				896	14	12544,0		
	LL-DW2 7 W/ Meter				688	7	4816,0		
	LL-DW3 14 W/ Meter				439	14	6146,0		
	LL-DW4 8 W/ Meter				3288	8	26304,0		
				Total Penerangan			53750,0		
II	Penerangan & STK area Parkir								
1	Parkir P9 - Liberty								
	TL TKO 1 x 36 W				58	36	2088,0		
	TL TKO 1 x 18 W				7	18	126,0		
	Down Light PLC 13 W				11	13	143,0		
				Total Penerangan			2357,0		
	Stk 200 W				5	200	1000,0		
2	Parkir P9 - Linclon								
	TL TKO 1 x 36 W				54	36	1944,0		
	TL TKO 1 x 18 W				3	18	54,0		
	Down Light PLC 13 W				4	13	52,0		
				Total Penerangan			2050,0		
	Stk 200 W			Total Stk	2	200	400,0		
3	Parkir P9 - Lixington								
	TL TKO 1 x 36 W				44	36	1584,0		
	TL TKO 1 x 18 W				5	18	90,0		
	Down Light PLC 13 W				11	13	143,0		
				Total Penerangan			1817,0		
	Stk 200 W			Total Stk	5	200	1000,0		

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4	Parkir P10 - Liberty								
	TL TKO 1 x 36 W				76	36	2736,0		
	TL TKO 1 x 18 W				11	18	198,0		
	Down Light PLC 13 W				11	13	143,0		
				Total Penerangan			3077,0		
	Stk 200 W			Total Stk	11	200	2200,0		
5	Parkir P10 - Linclon								
	TL TKO 1 x 36 W				60	36	2160,0		
	TL TKO 1 x 18 W				3	18	54,0		
	Down Light PLC 13 W				4	13	52,0		
				Total Penerangan			2266,0		
	Stk 200 W			Total Stk	4	200	800,0		
6	Parkir P10 - Lixington								
	TL TKO 1 x 36 W				55	36	1980,0		
	TL TKO 1 x 18 W				3	18	54,0		
	Down Light PLC 13 W				6	13	78,0		
				Total Penerangan			2112,0		
	Stk 200 W			Total Stk	7	200	1400,0		
III	Penerangan Lounge								
	Down led 15 W				18	15	270,0		
	Down led 9 W				67	9	603,0		
	Linear led 10 W / m				162	10	1620,0		
	Hanging lamp 100 w				8	100	800,0		
				Total Penerangan			3293,0		
	Stk Lantai 200 W / titik		Boss		18	200	3600,0		
	Stk dinding 200 W / titik		Boss		13	200	2600,0		
				Total Stk			6200,0		
IV	Lanskape & kolam renang								
	Bolard 9 W				101	9	909,0		
	Spike Lamp 9W				252	9	2268,0		
	ST- iL				19	5	95,0		
	Linear Led 10 w/ m				130	10	1300,0		
	Under water -L2R 18 W				11	18	198,0		
	Under water -L2R 14 W				20	14	280,0		
				Total Penerangan			4141,0		

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V	Penerangan & STK area Loby & Coridor								
1	Lantai.1- Liberty								
	Down Light PLC 13 W				32	13	416,0		
	TL TKO 1 x 18 W				6	18	108,0		
				Total Penerangan			524,0		
	Stk 200 W			Total Stk	8	200	1600,0		
2	Lantai.1- Linclon								
	Down Light PLC 13 W				28	13	364,0		
	TL TKO 1 x 18 W				3	18	54,0		
				Total Penerangan			418,0		
	Stk 200 W			Total Stk	6	200	1200,0		
3	Lantai.1- Lexington								
	Down Light PLC 13 W				30	13	390,0		
	TL TKO 1 x 18 W				6	18	108,0		
				Total Penerangan			498,0		
	Stk 200 W			Total Stk	6	200	1200,0		
4	Lantai.2- Linclon								
	Down Light PLC 13 W				27	13	351,0		
	TL TKO 1 x 18 W				3	18	54,0		
				Total Penerangan			405,0		
	Stk 200 W			Total Stk	6	200	1200,0		
5	Lantai.2- Lexington								
	Down Light PLC 13 W				29	13	377,0		
	TL TKO 1 x 18 W				4	18	72,0		
				Total Penerangan			449,0		
	Stk 200 W			Total Stk	6	200	1200,0		
6	Lantai.2.LB - 21 LB ( Total = 20 Lantai )								
	Down Light PLC 13 W ( 34/ Lantai )				680	13	8840,0		
	TL TKO 1 x 18 W ( 3 / Lantai )				100	18	1800,0		
				Total Penerangan			10640,0		
	Stk 200 W ( 8 /Lantai )			Total Stk	120	200	24000,0		


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									Tanggal
7	Lantai.3 LC - 21 LC ( Total = 19 Lantai )								
	Down Light PLC 13 W ( 32/ Lantai )				608	13	7904,0		
	TL TKO 1 x 18 W ( 3 / Lantai )				57	18	1026,0		
				Total Penerangan			8930,0		
	Stk 200 W ( 7 /Lantai )				133	200	26600,0		
6	Lantai.2 LX - 21 LX ( Total = 19 Lantai )								
	Down Light PLC 13 W ( 34/ Lantai )				646	13	8398,0		
	TL TKO 1 x 18 W ( 5 / Lantai )				95	18	1710,0		
				Total Penerangan			10108,0		
	Stk 200 W ( 7 /Lantai )			Total Stk	133	200	26600,0		
VI	Unit Apartement								
1	Unit Studio ( Sambungan 2200 W 1 $\phi$ ) = 168 unit	2200							
	Down light PLC 13 W ( 2 titik /unit )				372	13	4836,0		
	Down light PLC 9 W ( 1 titik / unit )				168	9	1512,0		
				Total Penerangan			6348,0		
	Stk Kulkas 100 W ( 1 titik / unit )				168	100	16800,0		
	Stk TV 70 W ( 1 titik / unit )				168	70	11760,0		
	Stk Water heater 400 W ( 1 titik/unit )				168	400	67200,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				168	400	67200,0		
	Stk dinding 70 W ( 1 titik / unit )				168	70	11760,0		
	Unit AC 1 Pk ( 750 W ) 1 titik / unit				168	750	126000,0		
				Total Stk			300720,0		
2	Unit 1.BA ( Sambungan 2200 W 1 $\phi$ ) = 332 unit	2200							
	Down light PLC 13 W ( 4 titik /unit )				1328	13	17264,0		
	Down light PLC 9 W ( 1 titik / unit )				332	9	2988,0		
				Total Penerangan			20252,0		
	Stk Kulkas 100 W ( 1 titik / unit )				332	100	33200,0		
	Stk TV 70 W ( 1 titik / unit )				332	70	23240,0		
	Stk Water heater 400 W ( 1 titik/unit )				332	400	132800,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				332	400	132800,0		
	Stk dinding 70 W ( 1 titik / unit )				332	70	23240,0		
	Unit AC 1 Pk ( 750 W ) 1 titik / unit				332	750	249000,0		
				Total Stk			594280,0		

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3	Unit 1.BB (Sambungan 2200 W 1Φ) = 82 unit	2200							
	Down light PLC 13 W ( 3 titik / unit )				246	13	3198,0		
	Down light PLC 9 W ( 1 titik / unit )				82	9	738,0		
				Total Penerangan			3936,0		
	Stk Kulkas 100 W ( 1 titik / unit )				82	100	8200,0		
	Stk TV 70 W ( 1 titik / unit )				82	70	5740,0		
	Stk Water heater 400 W ( 1 titik/unit )				92	400	36800,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				82	400	32800,0		
	Stk dinding 70 W ( 1 titik / unit )				82	70	5740,0		
	Unit AC 1 Pk ( 750 W ) 1 titik / unit				82	750	61500,0		
				Total Stk			150780,0		
4	Unit 2.BA (Sambungan 3500 W 1Φ) = 224 unit	3500							
	Down light PLC 13 W ( 6 titik / unit )				1344	13	17472,0		
	Down light PLC 9 W ( 1 titik / unit )				224	9	2016,0		
				Total Penerangan			19488,0		
	Stk Kulkas 100 W ( 1 titik / unit )				224	100	22400,0		
	Stk TV 70 W ( 2 titik / unit )				448	70	31360,0		
	Stk Water heater 400 W ( 1 titik/unit )				224	400	89600,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				224	400	89600,0		
	Stk dinding 70 W ( 6 titik / unit )				1344	70	94080,0		
	Unit AC 1 Pk ( 750 W ) 2 titik / unit				448	750	336000,0		
	Unit AC 1 Pk ( 375 W ) 2 titik / unit				448	375	168000,0		
				Total Stk			808640,0		
5	Unit 2.BB (Sambungan 3500 W 1Φ) = 349	3500							
	Down light PLC 13 W ( 6 titik / unit )				2094	13	27222,0		
	Down light PLC 9 W ( 1 titik / unit )				349	9	3141,0		
				Total Penerangan			30363,0		
	Stk Kulkas 100 W ( 1 titik / unit )				349	100	34900,0		
	Stk TV 70 W ( 2 titik / unit )				698	70	48860,0		
	Stk Water heater 400 W ( 1 titik/unit )				349	400	139600,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				349	400	139600,0		
	Stk dinding 70 W ( 5 titik / unit )				1745	70	122150,0		
	Unit AC 1 Pk ( 750 W ) 2 titik / unit				698	750	523500,0		
	Unit AC 1 Pk ( 375 W ) 2 titik / unit				698	375	261750,0		
				Total Stk			1235460,0		


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6	Unit 2.BC (Sambungan 3500 W 1Φ) = 189 unit	3500							
	Down light PLC 13 W ( 5 titik / unit )				945	13	12285,0		
	Down light PLC 9 W ( 2 titik / unit )				378	9	3402,0		
				Total Penerangan			15687,0		
	Stk Kulkas 100 W ( 1 titik / unit )				189	100	18900,0		
	Stk TV 70 W ( 2 titik / unit )				378	70	26460,0		
	Stk Water heater 400 W ( 1 titik/unit )				189	400	75600,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				189	400	75600,0		
	Stk dinding 70 W ( 4 titik / unit )				756	70	52920,0		
	Unit AC 1 Pk ( 750 W ) 2 titik / unit				378	750	283500,0		
	Unit AC 1 Pk ( 375 W ) 2 titik / unit				378	375	141750,0		
				Total Stk			655830,0		
7	Unit 2.BD (Sambungan 3500 W 1Φ) = 99 unit	3500							
	Down light PLC 13 W ( 5 titik / unit )				495	13	6435,0		
	Down light PLC 9 W ( 2 titik / unit )				198	9	1782,0		
				Total Penerangan			8217,0		
	Stk Kulkas 100 W ( 1 titik / unit )				99	100	9900,0		
	Stk TV 70 W ( 2 titik / unit )				198	70	13860,0		
	Stk Water heater 400 W ( 1 titik/unit )				99	400	39600,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				99	400	39600,0		
	Stk dinding 70 W ( 5 titik / unit )				495	70	34650,0		
	Unit AC 1 Pk ( 750 W ) 2 titik / unit				198	750	148500,0		
	Unit AC 1 Pk ( 375 W ) 2 titik / unit				198	375	74250,0		
				Total Stk			350460,0		
8	Unit 3.BA (Sambungan 6600 VA 1Φ) = 99 unit	6600							
	Down light PLC 13 W ( 8 titik /unit )				792	13	10296,0		
	Down light PLC 9 W ( 3 titik / unit )				297	9	2673,0		
				Total Penerangan			12969,0		
	Stk Kulkas 100 W ( 1 titik / unit )				99	100	9900,0		
	Stk TV 70 W ( 2 titik / unit )				198	70	13860,0		
	Stk Water heater 400 W ( 1 titik/unit )				99	400	39600,0		
	Stk Micro wave 400 W ( 1 titik/ unit )				99	400	39600,0		
	Stk dinding 70 W ( 7 titik / unit )				693	70	48510,0		
	Unit AC 1 Pk ( 750 W ) 2 titik / unit				198	750	148500,0		
	Unit AC 1 Pk ( 375 W ) 2 titik / unit				198	375	74250,0		
				Total Stk			364320,0		


[illegible]





 <b>JAYA CM</b>	<b>DATA TEKNIS PROYEK</b>				Nomor
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5	SOUND SYSTEM, TELEPON, FA, CCTV, BAS						KETERANGAN
	Equipment Utama			MERK	TYPE	JUMLAH	
5,1	SOUND SYSTEM					SATUAN	
I	Power Amplifier	:	TOA	ZP-2240	19	UNIT	
	MixerAmplifieer	:	TOA	ZP-2240	2	UNIT	
	Zone Selector	:	TOA		2	UNIT	
	Audio Player	:	TOA	Z-CD2011R	2	UNIT	
II	Instalasi Ceiling spekaer						
1	Lantai Basement						
	Ceiling speaker	:	TOA	ZS-2369	24	Titik	
	Wall Speaker	:	TOA	ZS-062	10	Titik	
	Horn Speaker	:	TOA	ZH-61SM	27	Titik	
2	Lantai Lower ground						
	Ceiling speaker	:	TOA	ZS-2369	24	Titik	
	Wall Speaker	:	TOA	ZS-062	12	Titik	
	Horn Speaker	:	TOA	ZH-61SM	11	Titik	
3	Lantai Lower Mezanin						
	Ceiling speaker	:	TOA	ZS-2369	26	Titik	
	Wall Speaker	:	TOA	ZS-062	5	Titik	
	Horn Speaker	:	TOA	ZH-61SM	10	Titik	
4	Ground Floor						
	Ceiling speaker	:	TOA	ZS-2369	86	Titik	
5	Lantai 2 s/d 30 area loby & Corridor						
	@ 29 Lt/Tower x 2 Tower = 58 Lantai						
	Ceiling speaker ( 7 titik )	:	TOA	ZS-2369	406	Titik	
6	Unit Apartemen						
6,1	Unit 2BR ( 2BR.A ) = 113 unit						
	Ceiling speaker ( 1 titik )	:	TOA	ZS-2369	113	Titik	
6,2	Unit 2BR ( 2BR.B ) = 58 unit						
	Ceiling speaker ( 1 titik )	:	TOA	ZS-2369	58	Titik	
6,3	Unit 3BR ( 3BR.A ) = 226 unit						
	Ceiling speaker ( 2 titik )	:	TOA	ZS-2369	452	Titik	
6,4	Unit 3BR ( 3BR.B ) = 116 unit						
	Ceiling speaker ( 2 titik )	:	TOA	ZS-2369	232	Titik	


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5.2 FIRE ALARM								
1	Master Control Fire Alarm			Context Plus	IFP Loop	1	Unit	
2	Anunciator Panel		:	Context Plus	IFP Compact	1	Unit	
			:					
II	Instalasi FireAlarm		:					
1	Lantai Basement							
	Smoke Detector			Context Plus	D-213	36	Titik	
	ROR Detector			Context Plus	D-103	117	Titik	
2	Lantai Lower Ground							
	Smoke Detector			Context Plus	D-213	36	Titik	
	ROR Detector			Context Plus	D-103	117	Titik	
3	Lantai Mezanine							
	Smoke Detector			Context Plus	D-213	42	Titik	
	ROR Detector			Context Plus	D-103	48	Titik	
4	Lantai Ground							
	Smoke Detector	450		Context Plus	D-213	54	Titik	
5	Lantai 2 s/d 30 area loby & Corridor							
	@ 29 Lt/Tower x 2 Tower = 58 Lantai							
	Smoke Detector ( 6 titik / lantai )			Context Plus	D-213	348	Titik	
6	Unit Apartemen							
6,1	Unit 2BR ( 2BR.A ) = 113 unit							
	Smoke Detector ( 1 titik / lantai )			Context Plus	D-213	113	Titik	
	Fixed heat Detector ( 1 titik/unit )			Context Plus	D-103	113	Titik	
	ROR Detector ( 3 titik / unit )			Context Plus	D-103	339	Titik	
6,2	Unit 2BR ( 2BR.B ) = 58 unit							
	Smoke Detector ( 1 titik / lantai )			Context Plus	D-213	58	Titik	
	Fixed heat Detector ( 1 titik/unit )			Context Plus	D-103	58	Titik	
	ROR Detector ( 3 titik / unit )			Context Plus	D-103	174	Titik	
6,3	Unit 3BR ( 3BR.A ) = 226 unit							
	Smoke Detector ( 2 titik / lantai )			Context Plus	D-213	452	Titik	
	Fixed heat Detector ( 1 titik/unit )			Context Plus	D-103	226	Titik	
	ROR Detector ( 4 titik / unit )			Context Plus	D-103	904	Titik	
6,4	Unit 3BR ( 3BR.B ) = 116 unit							
	Smoke Detector ( 2 titik / lantai )			Context Plus	D-213	232	Titik	
	Fixed heat Detector ( 1 titik/unit )			Context Plus	D-103	116	Titik	
	ROR Detector ( 5 titik / unit )			Context Plus	D-103	580	Titik	
	Total titik sprinkler untuk 3BR	8						

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5.3	CCTV							
I	Peralatan Utama		:					
1	Digital Vidio Recorder ( DVR )			Fracaro	DVR-Tri 16	16	Unit	
2	Led Monitor CCTV 32 Inch			LG		32	Unit	
3	Personil Computer			HP		1	Unit	
II	Instalasi CCTV							
1	Lantai Basement							
	Instalasi & CCTV			Fracaro	CDIR1200-3.6	14	Titik	
2	Lantai Lower Ground							
	Instalasi & CCTV			Fracaro	CDIR1200-3.6	9	Titik	
3	Lantai LG Mezanin							
	Instalasi & CCTV			Fracaro	CDIR1200-3.6	11	Titik	
4	Lantai Ground							
	Instalasi & CCTV			Fracaro	CDIR1200-3.6	22	Titik	
5	Lantai 2 s/d 30 area loby & Corridor							
	@ 29 Lt/Tower x 2 Tower = 58 Lantai							
	Instalasi & CCTV ( 3 titik / lantai )			Fracaro	CDIR1200-3.6	174	Titik	

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EQUIPMENT UTAMA			MERK	TYPE	JUMLAH	KAPASITAS	SATUAN	DAYA	SATUAN	KETERANGAN
Kapasitas Ground Reservoir			CONCRETE WATER PROOF	CONCRETE WATER PROOF	1	1839	M3	N/A	M3	1 GWT untuk 3 tower
Kapasitas Reservoir Atas	TOWER 1	:	Royal	FRP Panel	1	37	M3	N/A	M3	Liberty
	TOWER 2	:	Royal	FRP Panel	1	35	M3	N/A	M3	Lincoln
	TOWER 3	:	Royal	FRP Panel	1	36	M3	N/A	M3	Lexington
	TOWER 4	:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	TOWER 5	:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Kapasitas RWT		:	CONCRETE WATER PROOF	CONCRETE WATER PROOF	1	144	M3	N/A	M3	RAW WATER
Kapasitas CWT		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Kapasitas WTP		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Pompa WTP		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Pompa Air Bersih		:	Wilco	Vertical multi stage	4	18	m3/jam	16	KW	
Pompa Sumpit		:	-	-	-	-	-	-	-	Tidak ada sumpit, sumpit by mall
Pompa Grease Trap		:	-	-	-	-	-	-	-	Tidak ada greasetrap, greasetrap by mall
PIPA	AB	:	Westpex	PPR PN 10, PN 20			N/A	N/A	N/A	
	AK	:	Invilon	PVC AW Class 10 kg/cm2						
	ABK	:	Invilon	PVC AW Class 10 kg/cm2						
	ABD	:	Invilon	PVC AW Class 10 kg/cm2						
	AH	:	Invilon	PVC AW Class 10 kg/cm2						
	RISER AB	:	Westpex	PPR						
	R. POMPA AB	:	Ricon	Galvanized						
VALVE	R. POMPA AB		Kitz	Gate valve						
	PRV		Singer	Membrane (pilot operated)						
PRV			Singer	Membrane (pilot Operated)						
STP	1	:	-	Extended Aeration + MBR System	1	430	m3 / Hari			
	2	:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3	:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
			UKURAN							
Ukuran Grease Trap		:	N/A		N/A	N/A	N/A	N/A	N/A	
Ukuran Sumpit		:	N/A		N/A	N/A	N/A	N/A	N/A	

				DATA TEKNIS PROYEK						Nomor	
										Halaman	
BIRO ENGINEERING				APARTMENT						Tanggal	
6	FIRE FIGHTING										
	EQUIPMENT UTAMA			MERK	TYPE	JUMLAH	KAPASITAS (GPM)	DAYA (KW)	M3/H	KETERANGAN	
	Pompa Fire Fighting I	JOCKEY	:	Patterson	Vertical multistage	1	10	3			
		ELECTRIC	:	Patterson	Horizontal split case	1	1.000	270	230		
		DIESEL	:	Patterson	Horizontal split case	1	1.000	360 HP			
	Pompa Fire Fighting II	JOCKEY	:	N/A	N/A	N/A	N/A	N/A			
		ELECTRIC	:	N/A	N/A	N/A	N/A	N/A			
		DIESEL	:	N/A	N/A	N/A	N/A	N/A			
	Kapasitas Fire Tank	I	:	CONCRETE WATER PROOF	CONCRETE WATER PROOF	1	227	M3			
		II	:	N/A	N/A	N/A	N/A	N/A			
			:	N/A	N/A	N/A	N/A	K FACTOR	WARNA		
		TOWER LIBERTY				JUMLAH UNIT	JUMLAH SPRINKLER TIAP UNIT				
		UNIT STUDIO	:	Viking	Pendent	42	2	5,6	Merah		
		UNIT 1 BA	:	Viking	Pendent	84	-	5,6	Merah		
		UNIT 1 BB	:	Viking	Pendent	40	3	5,6	Merah		
		UNIT 2 BA	:	Viking	Pendent	83	4	5,6	Merah		
		UNIT 2 BB	:	Viking	Pendent	126	5	5,6	Merah		
		UNIT 2 BC	:	Viking	Pendent	41	5	5,6	Merah		
		UNIT 2 BD	:	Viking	Pendent	41	5	5,6	Merah		
		UNIT 3 BA	:	Viking	Pendent	41	7	5,6	Merah		
		UNIT 3 BB	:	Viking	Pendent	21	7	5,6	Merah		
		TOWER LINCOLN									
		UNIT STUDIO	:	Viking	Pendent	84	2	5,6	Merah		
		UNIT 1 BA	:	Viking	Pendent	164	3	5,6	Merah		
		UNIT 1 BB	:	Viking	Pendent	-	-	5,6	Merah		
		UNIT 2 BA	:	Viking	Pendent	59	4	5,6	Merah		
		UNIT 2 BB	:	Viking	Pendent	99	-	5,6	Merah		
		UNIT 2 BC	:	Viking	Pendent	103	5	5,6	Merah		
		UNIT 2 BD	:	Viking	Pendent	19	-	5,6	Merah		
		UNIT 3 BA	:	Viking	Pendent	19	-	5,6	Merah		
UNIT 3 BB	:	Viking	Pendent	-	-	5,6	Merah				


			DATA TEKNIS PROYEK							Nomor
										Halaman
BIRO ENGINEERING			APARTMENT							Tanggal
Springkler	TOWER LEXINGTON									
	UNIT STUDIO	:	Viking	Pendent	42	2	5,6	Merah		
	UNIT 1 BA	:	Viking	Pendent	84	-	5,6	Merah		
	UNIT 1 BB	:	Viking	Pendent	42	3	5,6	Merah		
	UNIT 2 BA	:	Viking	Pendent	82	4	5,6	Merah		
	UNIT 2 BB	:	Viking	Pendent	124	5	5,6	Merah		
	UNIT 2 BC	:	Viking	Pendent	40	5	5,6	Merah		
	UNIT 2 BD	:	Viking	Pendent	39	5	5,6	Merah		
	UNIT 3 BA	:	Viking	Pendent	39	7	5,6	Merah		
	UNIT 3 BB	:	Viking	Pendent	21	7	5,6	Merah		
	Koridor Unit LIBERTY	:	Viking	Pendent	-	21	5,6	Merah		
	Koridor Unit LINCOLN	:	Viking	Pendent	-	28	5,6	Merah		
	Koridor Unit LEXINGTON	:	Viking	Pendent	-	22	5,6	Merah		
	Lobby LIBERTY	:	Viking	Concealed Pendent	17	N/A	5,6	Merah		
	Koridor Lobby	:	Viking	Concealed Pendent	12	N/A	5,6	Merah		
	Lobby LINCOLN	:	Viking	Concealed Pendent	22	N/A	5,6	Merah		
	Koridor Lobby	:	Viking	Concealed Pendent	7	N/A	5,6	Merah		
	Lobby LEXINGTON	:	Viking	Concealed Pendent	17	N/A	5,6	Merah		
Koridor Lobby	:	Viking	Concealed Pendent	10	N/A	5,6	Merah			
Total Sprinkler Publik	:			85						
PARKIRAN	:	-	-	-	-	-	-			
BOX HIDRANT		:	Kaneda	IHB & OHB		N/A	N/A	Merah		
HYDRANT PILLAR		:	Kaneda	Short Two Way	1	N/A	N/A	Merah		
SEAMESE		:	Kaneda	Short Two Way	1	N/A	N/A	Merah		
PIPA	FF RISER		Spindo	Sch. 40						
	FF SETELAH PRV		Spindo	Medium						
VALVE	R. POMPA		Kitz	Gate Valve						
	INSTALASI		Kitz	Gate Valve						
MCV			Viking	Class 20K HZ, 16K LZ						
BCV			Viking	Class 16k						
PRV			Singer	Pilot Operated						
Fan	LIBERTY, LINCOLN & LEXINGTON		MERK TYPE		JUMLAH	KAPASITAS (CMH)	DAYA (KW)			
		:								
	PRESSURIZED		KRUGER	AXIAL ADJ. PITCH	6	27000 CFM	15	45576	2 PRESSURIZED untuk 1 tower, posisi di lantai roof	
	EXHAUST JANITOR		KRUGER	AXIAL ADJ. PITCH	4	2000 CFM	1,1	3376	2 Exhaust untuk tower liberty & 2 Exhaust untuk tower lexington , posisi di lantai roof	


	DATA TEKNIS PROYEK								Nomor
									Halaman
									Tanggal
BIRO ENGINEERING		APARTMENT							

7	VENTILATION & AIR CONDITION			MERK	TYPE	JUMLAH	KAPASITAS (Jumlah 1 Unit/ 1 Area)	SATUAN	DAYA	SATUAN	KETERANGAN
	Chiller		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Kapasitas Pompa Chiller		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	AHU/ FCU		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Cooling Tower		:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	AC Unit Total	TOWER LIBERTY	:			JUMLAH AC TIAP UNIT	KAPASITAS AC				
		UNIT STUDIO									
		Bedroom		Daikin	Split Wall	1	9000	BTUH			AC
		UNIT 1 BA									1656000 184 Type Studio
		Bedroom		Daikin	Split Wall	1	9000	BTUH			4086000 454 Type 1 BR
		UNIT 1 BB									21150000 940 Type 2 BR
		Bedroom		Daikin	Split Wall	1	9000	BTUH			4185000 155 Type 3 BR
		UNIT 2 BA									
		Living Room		Daikin	Split Wall	1	9000	BTUH			31.077.000,00 BTUH
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		UNIT 2 BB									
		Living Room		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		UNIT 2 BC									
		Living Room		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		UNIT 2 BD									
		Living Room		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		UNIT 3 BA									
		Living Room		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		Bedroom 3		Daikin	Split Wall	1	4500	BTUH			
		UNIT 3 BB									
		Living Room		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 1		Daikin	Split Wall	1	9000	BTUH			
		Bedroom 2		Daikin	Split Wall	1	4500	BTUH			
		Bedroom 3		Daikin	Split Wall	1	4500	BTUH			





			DATA TEKNIS PROYEK								Nomor
											Halaman
BIRO ENGINEERING			APARTMENT								Tanggal
		TOWER LEXINGTON									
		UNIT STUDIO									
		Bedroom	Daikin	Split Wall	1	9000	BTUH				
		UNIT 1 BA									
		Bedroom	Daikin	Split Wall	1	9000	BTUH				
		UNIT 1 BB									
		Bedroom	Daikin	Split Wall	1	9000	BTUH				
		UNIT 2 BA									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		UNIT 2 BB									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		UNIT 2 BC									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		UNIT 2 BD									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		UNIT 3 BA									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		Bedroom 3	Daikin	Split Wall	1	4500	BTUH				
		UNIT 3 BB									
		Living Room	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 1	Daikin	Split Wall	1	9000	BTUH				
		Bedroom 2	Daikin	Split Wall	1	4500	BTUH				
		Bedroom 3	Daikin	Split Wall	1	4500	BTUH				
		Total kapasitas AC 3BR				27.000					

			DATA TEKNIS PROYEK								Nomor
											Halaman
BIRO ENGINEERING			APARTMENT								Tanggal
	AC Public Total					1.340.000					
		Lantai Dasar									TOTAL BTUH
		Lift Lobby Liberty	Daikin	Split Duct	2	20.000	BTUH	2400	Watt		40000
		Public Liberty	Daikin	Split Duct	1	100.000	BTUH	10600	Watt		100000
		Lift Lobby Lincoln	Daikin	Split Duct	1	20.000	BTUH	2400	Watt		20000
		Public Lincoln	Daikin	Split Duct	1	150.000	BTUH	16000	Watt		150000
		Lift Lobby Lexington	Daikin	Split Duct	2	20.000	BTUH	2400	Watt		40000
		Public Lexington	Daikin	Split Duct	1	150.000	BTUH	16000	Watt		150000
		Lounge Lt.1	Daikin	Split Duct	4	150.000	BTUH	600000	Watt		600000
		AC lobby BS - LGMP1	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
		AC Lobby Lift P6A - P10A	Daikin	Ceiling Casette	16	15000	BTUH	2,4	KW		240000
	TOTAL AC + Unit					32.417.000	BTUH				
	REFRIGERANT										
	Fan	IAF PARKIR	:								Exhaust fan area parkir tidak ada, masuk sistem mall.
		EAF PARKIR	:								Intake fan area parkir tidak ada, masuk sistem mall.
						CFM		Fconv			
		Toilet Unit 3BR	Kruger	Ceiling Mounted	-	100	-	1,688	168,8		
	PIPA	CHWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
		CHWR	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
		REFRIGERANT	Mueller	Non INTEGRATED	N/A	N/A	N/A	N/A	N/A		
8	ELEVATOR & ESCALATOR			MERK	TYPE	JUMLAH	KAPASITAS (KG)	KAPASITAS (PERSON)	KECEPATAN (MPM)	DAYA (KW)	KETERANGAN
	Low Zone Elevator		:								
	High Zone Elevator	TOWER 1	:	mitsubishi	LP-LB-01, LP-LB-02, LP-LB-03, LP-LB-04	4	1.350	20	180	27.4 KW	LIBERTY / LIFT PENUMPANG
		TOWER 2	:	mitsubishi	LP-LC-01, LP-LC-02, LP-LC-03	3	1.800	26	180	27.4 KW	LINCOLN / LIFT PENUMPANG
		TOWER 3	:	mitsubishi	LP-LX-01, LP-LX-02, LP-LX-03, LP-LX-04	4	1.150	17	180	27.4 KW	LEXINGTON / LIFT PENUMPANG
	Service Lift	TOWER 1	:	mitsubishi	LS-LB-01, LS-LB-02	2	1.350	120	120	26.3 KW	LIBERTY / LIFT SERVICE
		TOWER 2	:	mitsubishi	LS-LC-01	1	1350	120	120	26.3 KW	LINCOLN / LIFT SERVICE
		TOWER 3	:	mitsubishi	LS-LX-01, LS-LX-02	2	1350	120	120	26.3 KW	LEXINGTON / LIFT SERVICE
	Escalator		:	-	-	-	-	-	-	-	
	Kemiringan Escalator		:	-	-	-	-	-	-	-	
	Ketinggian Escalator		:	-	-	-	-	-	-	-	
	Travelator		:	-	-	-	-	-	-	-	
	Kemiringan Travelator		:	-	-	-	-	-	-	-	
	Ketinggian Travelator		:	-	-	-	-	-	-	-	



BIRO ENGINEERING	DATA TEKNIS PROYEK						Nomor
							Halaman
	APARTMENT						Tanggal

9 GEN SET				MERK	TYPE	JUMLAH	KAPASITAS (KVA)	Total (KVA)
	Gen Set		:	MITSUBISHI	-	3	1450	4350

*Bila lebih dari 1 type rinci masing-masing type dan jumlahnya*