

Davis Langdon 

**PROGRAM
COST MODEL**

for

**PEER Tall Buildings Study
Concrete Structural Option
Los Angeles, California**

March 8, 2010

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OVERALL SUMMARY

	Gross Floor Area	\$ / SF	\$x1,000
Construction Cost (Including Design)			
Code Based	683,748 SF	325.77	222,744
Performance Based	683,748 SF	324.89	222,142
Performance Based Plus	683,748 SF	331.60	226,728
FF&E Cost			
Furniture & Fittings, (residential)	476,716 SF	20.00	9,534
Equipment, including computer systems	476,716 SF	7.00	3,337
Personal Property			
Personal Contents	476,716 SF	10.00	4,767
Cars in parking (Maximum count)	520 EA	25,000.00	13,000

Please refer to the Inclusions and Exclusions sections of this report

AREAS & CONTROL QUANTITIES

Areas

	SF	SF	SF
Enclosed Areas			
Basement Levels B1 - B4	207,024		
Ground Level	11,314		
Levels 2 - 42	463,874		
Penthouse	1,536		
 SUBTOTAL, Enclosed Area	<hr/>	683,748	
 Covered area			
 SUBTOTAL, Covered Area @ ½ Value	<hr/>		
 TOTAL GROSS FLOOR AREA		<hr/>	683,748

Control Quantities

			Ratio to Gross Area
Functional Units	310 Units		
Number of stories (x1,000)	46 EA		0.067
Gross Area	683,748 SF		1.000
Enclosed Area	683,748 SF		1.000
Covered Area	0 SF		0.000
Footprint Area	51,756 SF		0.076
Volume	7,212,004 CF		10.548
Basement Volume	2,070,240 CF		3.028
Gross Wall Area	212,093 SF		0.310
Retaining Wall Area	36,000 SF		0.053
Finished Wall Area	168,413 SF		0.246
Windows or Glazing Area	19.28% 40,883 SF		0.060
Roof Area - Flat	51,756 SF		0.076
Roof Area - Sloping	0 SF		0.000
Roof Area - Total	51,756 SF		0.076
Roof Glazing Area	0 SF		0.000
Interior Partition Length	132,334 LF		0.194
Finished Area	683,748 SF		1.000
Elevators (x10,000)	6 EA		0.088
Plumbing Fixtures (x1,000)	2,914 EA		4.262
Electrical Load	6,000 KW		8.775

CODE BASED COMPONENT SUMMARY

Gross Area: 683,748 SF

		\$/SF	\$x1,000
1. Foundations		16.35	11,178
2. Vertical Structure		17.64	12,060
3. Floor & Roof Structures		30.96	21,167
4. Exterior Cladding		33.35	22,803
5. Roofing, Waterproofing & Skylights		3.95	2,699
Shell (1-5)		102.24	69,907
6. Interior Partitions, Doors & Glazing		24.75	16,922
7. Floor, Wall & Ceiling Finishes		21.25	14,530
Interiors (6-7)		46.00	31,452
8. Function Equipment & Specialties		5.73	3,919
9. Stairs & Vertical Transportation		10.41	7,120
Equipment & Vertical Transportation (8-9)		16.15	11,039
10 Plumbing Systems		19.04	13,015
11 Heating, Ventilating & Air Conditioning		13.86	9,475
12 Electric Lighting, Power & Communications		21.33	14,586
13 Fire Protection Systems		5.37	3,669
Mechanical & Electrical (10-13)		59.59	40,745
Total Building Construction (1-13)		223.98	153,144
14 Site Preparation & Demolition		2.19	1,500
15 Site Paving, Structures & Landscaping		1.76	1,206
16 Utilities on Site		0.73	500
Total Site Construction (14-16)		4.69	3,206
TOTAL BUILDING & SITE (1-16)		228.67	156,351
General Conditions	12.00%	27.44	18,762
Contractor's Overhead & Profit or Fee	6.00%	15.37	10,507
PLANNED CONSTRUCTION COST		March 2010	271.47
Design, Management and Inspection	20.00%	54.29	37,124
Escalation is excluded	0.00%	0.00	0
RECOMMENDED BUDGET		March 2010	325.77
			222,744

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
1. Foundations				
Basement Excavation				
Excavation	99,173	CY	15.00	1,487,595
Shoring at perimeter	36,400	SF	50.00	1,820,000
Backfill with imported material	14,829	CY	35.00	519,015
Dispose off site	99,173	CY	20.00	1,983,460
Hazardous material remediation				Excluded
Foundations				
Reinforced concrete mat foundation				
Excavation and disposal	10,278	CY	15.00	154,170
Formwork	5,240	SF	18.00	94,320
Reinforcing steel	1,469,135	LBS	1.15	1,689,505
Concrete, f'c= 6ksi	10,278	CY	325.00	3,340,350
Elevator pits	6	EA	15,000.00	90,000
				11,178,415
2. Vertical Structure				
Columns and pilasters				
Concrete columns				
Formwork	99,875	SF	25.00	2,496,875
Reinforcing steel	972,895	LBS	1.25	1,216,119
Concrete, f'c= 8ksi	2,048	CY	350.00	716,800
Concrete retaining walls				
Concrete retaining wall				
Formwork to one side	36,400	SF	15.00	546,000
Reinforcing steel	240,240	LBS	1.25	300,300
Concrete, f'c= 5ksi	1,978	CY	225.00	445,050
Concrete core walls				
Formwork to both sides	157,864	SF	18.00	2,841,552
Reinforcing steel	1,171,663	LBS	1.25	1,464,579
Concrete, f'c= 8ksi	5,808	CY	350.00	2,032,800
				12,060,075

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
3. Floor and Roof Structure				
Floor at lowest level				
Slab on grade - See foundations (mat slab)				
Suspended floors				
21,103				
10" thick reinforced concrete flat slab - basement slabs				
Formwork	155,268	SF	10.00	1,552,680
Reinforcing steel	768,577	LBS	1.25	960,721
Concrete, f'c= 5.5ksi	4,792	CY	225.00	1,078,200
8" thick post tensioned slabs				
Formwork	463,874	SF	10.00	4,638,740
Reinforcing steel	1,122,575	LBS	1.25	1,403,219
Post tension tendons	459,236	LBS	2.00	918,472
Studrails at columns (9 studrais with 9 studs per rail)	1,476	LOC	4,000.00	5,904,000
Concrete, f'c= 5.5ksi	12,599	CY	225.00	2,834,775
Ground level slab/roof				
12" thick reinforced concrete flat slab - ground level				
Formwork	51,756	SF	10.00	517,560
Reinforcing steel	455,453	LBS	1.25	569,316
Concrete, f'c= 5.5ksi	2,109	CY	225.00	474,525
High roof				
10" thick reinforced concrete flat slab				
Formwork	12,850	SF	10.00	128,500
Reinforcing steel	70,675	LBS	1.25	88,344
Concrete, f'c= 5.5ksi	437	CY	225.00	98,325
				21,167,377

4. Exterior Cladding

Wall framing, furring and insulation				
Exterior wall framing	168,413	SF	8.00	1,347,304
Furring to interior face of retaining wall	36,000	SF	4.00	144,000
Insulation and vapor barrier	161,050	SF	1.50	241,575

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Applied exterior finishes				
Exterior wall finish - curtain wall with spandrel panels	125,050	SF	120.00	15,006,000
Parapets & edge detailing	400	LF	250.00	100,000
Interior finish to exterior walls				
Gypsum board, taped and sanded	161,050	SF	3.50	563,675
Windows, glazing and louvers				
Exterior wall finish - curtain wall with glazing	40,883	SF	120.00	4,905,960
Exterior doors, frames and hardware				
Glazed Doors & Entrances (allow revolving)	12	EA	35,000.00	420,000
Solid Exterior Doors	8	EA	3,000.00	24,000
Overhead Doors	2	EA	25,000.00	50,000
				22,802,514

5. Roofing, Waterproofing & Skylights

Waterproofing				
Waterproofing at slab on grade	51,756	SF	10.00	517,560
Waterproofing at retaining wall	36,000	SF	10.00	360,000
Waterproofing membrane under plaza	40,442	SF	15.00	606,630
Insulation				
Rigid insulation at roof	11,314	SF	6.00	67,884
Roofing				
Balconies & accessible roofs	40,442	SF	25.00	1,011,050
High roof	11,314	SF	12.00	135,768
				2,698,892

6. Interior Partitions, Doors & Glazing

Partition framing and cores				
CMU partitions at basement levels	1,656	LF	325.00	538,200
Core partitions	11,880	LF	90.00	1,069,200
Standard partitions	118,798	LF	72.00	8,553,456

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Doors, frames & hardware				
Unit entrance doors	310	EA	2,250.00	697,500
Standard interior doors	2,680	EA	1,800.00	4,824,000
Closet doors at units - allow bi-fold	1,240	EA	1,000.00	1,240,000
				16,922,356

7. Floor, Wall & Ceiling Finishes

Floors including base				
Lobby flooring	5,000	SF	35.00	175,000
Core circulation - allow carpet	70,530	SF	6.00	423,180
Residential				
Livingrooms - allow wood	141,050	SF	22.00	3,103,100
Bedrooms - allow carpet	164,565	SF	6.00	987,390
Kitchen - allow stone tile	42,315	SF	25.00	1,057,875
Bathrooms - allow porcelain tile	47,020	SF	20.00	940,400
Special use areas	6,236	SF	10.00	62,360
Concrete sealer at basement	207,024	SF	2.00	414,048
Walls				
Lobby	1	EA	75,000.00	75,000
Core circulation	141,060	SF	3.00	423,180
Residential				
Livingrooms	282,100	SF	2.00	564,200
Bedrooms	329,130	SF	1.00	329,130
Kitchen	84,630	SF	10.00	846,300
Bathrooms	94,040	SF	12.00	1,128,480
Special use areas	9,354	SF	12.00	112,248
Paint to concrete and CMU at basement	70,776	SF	1.00	70,776
Ceilings				
Lobby	5,000	SF	25.00	125,000
Core circulation	70,530	SF	12.00	846,360
Residential				
Livingrooms	141,050	SF	6.00	846,300
Bedrooms	164,565	SF	6.00	987,390
Kitchen	42,315	SF	6.00	253,890
Bathrooms	47,020	SF	6.00	282,120
Special use areas	6,236	SF	10.00	62,360
Paint to exposed structure at basement	207,024	SF	2.00	414,048
				14,530,135

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
8. Function Equipment & Specialties				
Specialties				
Fire extinguisher cabinets	150	EA	450.00	67,500
Trash chute	1	EA	110,000.00	110,000
Parking Garage equipment	1	LS	25,000.00	25,000
Built in Equipment				
Lobby/entry	1	LS	25,000.00	25,000
Core area	70,530	SF	0.75	52,898
Residential				
Livingrooms	141,050	SF	0.05	7,053
Bedrooms	164,565	SF	0.10	16,457
Bathrooms	47,020	SF	1.00	47,020
Kitchen	42,315	EA	6.00	253,890
Special use areas	6,236	SF	2.00	12,472
Residential appliances				
Kitchen appliances				
Refrigerator	310	EA	1,700.00	527,000
Range	310	EA	2,000.00	620,000
Range hood	310	EA	1,000.00	310,000
Double oven	310	EA	800.00	248,000
Dishwasher	310	EA	850.00	263,500
Microwave	310	EA	450.00	139,500
Washing machine	310	EA	1,200.00	372,000
Dryer - electric	310	EA	1,200.00	372,000
Window washing equipment	1	LS	450,000.00	450,000
				3,919,289

9. Stairs & Vertical Transportation

Stairs				
Regular stair flights	88	EA	22,000.00	1,936,000
Elevators				
Passenger Elevators, gearless traction	176	STOP	28,000.00	4,928,000
Freight Elevators, geared traction, 4 stop	8	STOP	32,000.00	256,000
				7,120,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
10. Plumbing Systems				
Sanitary fixtures and connection piping				
Toilets	736	EA	1,600.00	1,177,600
Lavatories	736	EA	1,200.00	883,200
Tub/shower combo	580	EA	1,800.00	1,044,000
Showers	232	EA	350.00	81,200
Kitchen sinks	310	EA	1,700.00	527,000
Washing machine connection	310	EA	350.00	108,500
Hose bibbs	10	EA	500.00	5,000
Domestic water and distribution				
Cold Water Service				
Copper piping incl. fittings >2"	900	LF	50.00	45,000
Copper piping incl. fittings to 2"	58,280	LF	32.00	1,864,960
Hot Water Service				
Copper piping incl. fittings >2"	1,400	LF	50.00	70,000
Copper piping incl. fittings to 2"	65,040	LF	32.00	2,081,280
Insulation	66,440	LF	9.00	597,960
Valves				
Isolation valves to 3/4"	4,772	EA	65.00	310,180
Domestic Water Supply Equipment				
Hot water heating and circulation	310	EA	900.00	279,000
Sanitary waste				
Waste & vent pipework-above ground				
Cast Iron No Hub, >6"	900	LF	75.00	67,500
Cast Iron No Hub, to 3"	58,280	LF	32.00	1,864,960
Sanitary waste, vent and service piping				
Floor Drains	88	EA	1,000.00	88,000
Rain Water Drainage				
Pipe and Fittings	51,583	LF	35.00	1,805,422
Roof/Overflow Drains	86	EA	750.00	64,695
Gas distribution				
Copper piping incl. fittings to 2"	2,000	LF	25.00	50,000
				13,015,457

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
11. Heating, Ventilation & Air Conditioning				
Heat generating systems				
Heating hot water boilers, high efficiency condensing: Core Area only	3,700	MBTH	25.00	92,500
Heating hot water pumps	2	EA	15,000.00	30,000
Cooling Generating Systems: Core Area only				
Cooling towers	500	TN	250.00	125,000
Chillers, 2 each	500	TN	450.00	225,000
Chilled water pumps	2	EA	10,000.00	20,000
Condenser water pumps	2	EA	5,000.00	10,000
Variable speed drives, vibration isolation, etc.	6	EA	12,000.00	72,000
Distribution systems: Core Area only				
Piping, fittings, valves and insulation				
Chilled water				
Chilled water pipework, fittings	1,400	LF	95.00	133,000
Valves and specialties	1	LS	75,000.00	75,000
Heating hot water				
Heating hot water pipework, fittings, including insulation				
6" - 4"	1,200	LF	85.00	102,000
< = 3"	4,000	LF	30.00	120,000
Valves and specialties	1	LS	25,000.00	25,000
Condenser water				
Condenser water pipework, fittings	1,200	LF	90.00	108,000
Valves and specialties	1	LS	25,000.00	25,000
Connections to Fan Coil Boxes	164	EA	350.00	57,236
Air handling equipment				
Dedicated outside air supply air handler	220,000	CFM	5.00	1,100,000
Individual unit packaged units	310	EA	6,000.00	1,860,000
Fan Coil Units				
Core/Shell	164	EA	1,250.00	204,415
Parking area	207	EA	1,250.00	258,750
Sound attenuation - duct mounted	220,000	CFM	0.25	55,000
Air distribution, return and exhaust				
Galvanized sheet metal ductwork	288,790	LB	8.00	2,310,320
Dryer exhaust duct	9,300	LF	6.00	55,800
Flexible ductwork	3,000	LF	6.00	18,000
Dampers, volume	100	EA	40.00	4,000
Dampers, smoke/fire	80	EA	1,200.00	96,000
Insulation/duct liner	100,000	SF	2.50	250,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Diffusers, registers and grilles				
Ceiling				
Core/Shell	818	EA	200.00	163,532
Tenant areas, 1 per 150 USF	2,633	EA	150.00	394,950
Parking area				
Terminal & Package Units				
Exhaust fans at toilet rooms	736	EA	350.00	257,600
Controls and instrumentation				
DDC Control system	288,790	SF	3.00	866,370
Test and balance				
Test and balance	288,790	SF	1.25	360,988
				9,475,461

12. Electrical Lighting, Power & Communication

Primary Service, Medium voltage				
Switchgear 13.8KV including (2) tie breakers, (2) feeder breakers, and customer metering	6,000	KVA	60.00	360,000
Transformer substation 13.8KV/110-208V, double-ended including secondary distribution	6,000	KVA	150.00	900,000
Distribution switchboards - 110-208V	18,600	AMP	25.00	465,000
Distribution panelboards - 208V	310	EA	1,500.00	465,000
Feeder conduit and wire - 600V	45,000	LF	80.00	3,600,000
Emergency and Uninterrupted Power				
Emergency Generator	1,500	KVA	350.00	525,000
Automatic transfer switch	1,500	AMP	45.00	67,500
Distribution panelboards	1,500	AMP	25.00	37,500
General Purpose Lighting				
Panelboards	46	EA	2,500.00	115,000
Lighting				
Core Area	81,766	SF	12.00	981,192
Tenant Area	394,950	SF	2.00	789,900
Parking area	207,024	SF	4.00	828,096

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Machine and Equipment Power				
Connections and switches including conduit and wire				
Elevators	16	EA	1,000.00	16,000
Cooling towers	2	EA	5,000.00	10,000
Chillers	2	EA	12,000.00	24,000
Pumps	6	EA	2,000.00	12,000
Miscellaneous connections	683,748	SF	0.75	512,811
User Convenience Power				
Panelboards	46	EA	2,500.00	115,000
Receptacles				
Core/Shell	81,766	SF	3.00	245,298
Tenant Area	394,950	SF	3.00	1,184,850
Parking area	207,024	SF	2.00	414,048
Communications				
Telephone and communications				
Core Area, panels and backbone only	1	LS	75,000.00	75,000
Tenant Units	310	EA	800.00	248,000
Security Systems				
Main Security System	683,748	SF	0.10	68,375
Tenant Units	310	EA	900.00	279,000
Fire Alarm Systems				
Main Fire Alarm Systems	683,748	SF	3.00	2,051,244
Other Electrical Systems				
Grounding Systems	683,748	SF	0.25	170,937
Lightning protection	1	LS	25,000.00	25,000
				14,585,751

13. Fire Protection Systems

Sprinkler and Standpipe Systems				
Fire Protection Sprinkler Systems	683,748	SF	4.00	2,734,992
Standpipe and Hose Systems	683,748	SF	1.00	683,748
Specialties and Other Systems				
Smoke Evacuation	1	LS	250,000.00	250,000
				3,668,740

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
<u>14. Site Preparation & Building Demolition</u>				
Site Preparation	100,000	SF	15.00	1,500,000
				<hr/>
				1,500,000
<u>15. Site Paving, Structures & Landscaping</u>				
Site Development	48,244	SF	25.00	1,206,100
				<hr/>
				1,206,100
<u>16. Utilities on Site</u>				
Site Utilities	1	LS	500,000.00	500,000
				<hr/>
				500,000

PERFORMANCE BASED COMPONENT SUMMARY

		Gross Area: 683,748 SF	
		\$/SF	\$x1,000
1.	Foundations	18.23	12,462
2.	Vertical Structure	19.54	13,362
3.	Floor & Roof Structures	26.81	18,333
4.	Exterior Cladding	33.35	22,803
5.	Roofing, Waterproofing & Skylights	3.69	2,526
Shell (1-5)		101.62	69,486
6.	Interior Partitions, Doors & Glazing	24.75	16,922
7.	Floor, Wall & Ceiling Finishes	21.25	14,530
Interiors (6-7)		46.00	31,452
8.	Function Equipment & Specialties	5.73	3,919
9.	Stairs & Vertical Transportation	10.41	7,120
Equipment & Vertical Transportation (8-9)		16.15	11,039
10.	Plumbing Systems	19.04	13,015
11.	Heating, Ventilating & Air Conditioning	13.86	9,475
12.	Electric Lighting, Power & Communications	21.33	14,586
13.	Fire Protection Systems	5.37	3,669
Mechanical & Electrical (10-13)		59.59	40,745
Total Building Construction (1-13)		223.36	152,723
14.	Site Preparation & Demolition	2.19	1,500
15.	Site Paving, Structures & Landscaping	1.76	1,206
16.	Utilities on Site	0.73	500
Total Site Construction (14-16)		4.69	3,206
TOTAL BUILDING & SITE (1-16)		228.05	155,929
	General Conditions	12.00%	27.37 18,711
	Contractor's Overhead & Profit or Fee	6.00%	15.32 10,478
PLANNED CONSTRUCTION COST		March 2010	270.74 185,118
	Design, Management and Inspection	20.00%	54.15 37,024
	Escalation is excluded	0.00%	0.00 0
RECOMMENDED BUDGET		March 2010	324.89 222,142

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
1. Foundations				
Basement Excavation				
Excavation	99,173	CY	15.00	1,487,595
Shoring at perimeter	36,400	SF	50.00	1,820,000
Backfill with imported material	14,829	CY	35.00	519,015
Dispose off site	99,173	CY	20.00	1,983,460
Hazardous material remediation				Excluded
Foundations				
Reinforced concrete Mat foundation				
Excavation and disposal	12,583	CY	15.00	188,745
Forwork	7,240	SF	18.00	130,320
Reinforcing steel	1,872,457	LBS	1.15	2,153,326
Concrete, f'c= 6ksi	12,583	CY	325.00	4,089,475
Elevator pits	6	EA	15,000.00	90,000
				12,461,936

2. Vertical Structure

Columns and pilasters				
Concrete columns				
Forwork	99,875	SF	25.00	2,496,875
Reinforcing steel	972,895	LBS	1.25	1,216,119
Concrete, f'c= 8ksi	2,048	CY	350.00	716,800
Concrete retaining walls				
Concrete retaining wall				
Formwork to one side	36,400	SF	15.00	546,000
Reinforcing steel	240,240	LBS	1.25	300,300
Concrete, f'c= 5ksi	1,978	CY	225.00	445,050
Concrete core walls				
Formwork to both sides	157,864	SF	18.00	2,841,552
Reinforcing steel	1,961,782	LBS	1.25	2,452,228
Concrete, f'c= 8ksi	6,706	CY	350.00	2,347,100
				13,362,023

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
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3. Floor and Roof Structure

Floor at lowest level
 Slab on grade - See foundations (mat slab)

Suspended floors

10" thick reinforced concrete flat slab -
 basement slabs

Formwork	155,268	SF	10.00	1,552,680
Reinforcing steel	768,577	LBS	1.25	960,721
Concrete, f'c= 5.5ksi	4,792	CY	225.00	1,078,200

8" thick post tensioned slabs

Formwork	463,874	SF	10.00	4,638,740
Reinforcing steel	1,122,575	LBS	1.25	1,403,219
Post tension tendons	459,236	LBS	2.00	918,472
Studrails at columns (9 studrais with 9 studs per rail)	1,476	LOC	4,000.00	5,904,000
Concrete, f'c= 5.5ksi	3	CY	225.00	675

Ground level slab/roof

12" thick reinforced concrete flat slab -
 ground level

Formwork	51,756	SF	10.00	517,560
Reinforcing steel	455,453	LBS	1.25	569,316
Concrete, f'c= 5.5ksi	2,109	CY	225.00	474,525

High roof

10" thick reinforced concrete flat slab

Formwork	12,850	SF	10.00	128,500
Reinforcing steel	70,675	LBS	1.25	88,344
Concrete, f'c= 5.5ksi	437	CY	225.00	98,325

18,333,277

4. Exterior Cladding

Wall framing, furring and insulation

Exterior wall framing	168,413	SF	8.00	1,347,304
Furring to interior face of retaining wall	36,000	SF	4.00	144,000
Insulation and vapor barrier	161,050	SF	1.50	241,575

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Applied exterior finishes				
Exterior wall finish - curtain wall with spandrel panels	125,050	SF	120.00	15,006,000
Parapets & edge detailing	400	LF	250.00	100,000
Interior finish to exterior walls				
Gypsum board, taped and sanded	161,050	SF	3.50	563,675
Windows, glazing and louvers				
Exterior wall finish - curtain wall with glazing	40,883	SF	120.00	4,905,960
Exterior doors, frames and hardware				
Glazed Doors & Entrances (allow revolving)	12	EA	35,000.00	420,000
Solid Exterior Doors	8	EA	3,000.00	24,000
Overhead Doors	2	EA	25,000.00	50,000
				22,802,514

5. Roofing, Waterproofing & Skylights

Waterproofing				
Waterproofing at slab on grade	49,940	SF	10.00	499,400
Waterproofing at retaining wall	42,912	SF	10.00	429,120
Waterproofing membrane under plaza	31,750	SF	15.00	476,250
Insulation				
Rigid insulation at roof	18,190	SF	6.00	109,140
Roofing				
Balconies & accessible roofs	31,750	SF	25.00	793,750
High roof	18,190	SF	12.00	218,280
				2,525,940

6. Interior Partitions, Doors & Glazing

Partition framing and cores				
CMU partitions at basement levels	1,656	LF	325.00	538,200
Core partitions	11,880	LF	90.00	1,069,200
Standard partitions	118,798	LF	72.00	8,553,456

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Doors, frames & hardware				
Unit entrance doors	310	EA	2,250.00	697,500
Standard interior doors	2,680	EA	1,800.00	4,824,000
Closet doors at units - allow bi-fold	1,240	EA	1,000.00	1,240,000
				16,922,356

7. Floor, Wall & Ceiling Finishes

Floors including base				
Lobby flooring	5,000	SF	35.00	175,000
Core circulation - allow carpet	70,530	SF	6.00	423,180
Residential				
Livingrooms - allow wood	141,050	SF	22.00	3,103,100
Bedrooms - allow carpet	164,565	SF	6.00	987,390
Kitchen - allow stone tile	42,315	SF	25.00	1,057,875
Bathrooms - allow ceramic tile	47,020	SF	20.00	940,400
Special use areas	6,236	SF	10.00	62,360
Concrete sealer at basement	207,024	SF	2.00	414,048
Walls				
Lobby	1	EA	75,000.00	75,000
Core circulation	141,060	SF	3.00	423,180
Residential				
Livingrooms	282,100	SF	2.00	564,200
Bedrooms	329,130	SF	1.00	329,130
Kitchen	84,630	SF	10.00	846,300
Bathrooms	94,040	SF	12.00	1,128,480
Special use areas	9,354	SF	12.00	112,248
Paint to concrete and CMU at basement	70,776	SF	1.00	70,776
Ceilings				
Lobby	5,000	SF	25.00	125,000
Core circulation	70,530	SF	12.00	846,360
Residential				
Livingrooms	141,050	SF	6.00	846,300
Bedrooms	164,565	SF	6.00	987,390
Kitchen	42,315	SF	6.00	253,890
Bathrooms	47,020	SF	6.00	282,120
Special use areas	6,236	SF	10.00	62,360
Paint to exposed structure at basement	207,024	SF	2.00	414,048
				14,530,135

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
8. Function Equipment & Specialties				
Specialties				
Fire extinguisher cabinets	150	EA	450.00	67,500
Trash chute	1	EA	110,000.00	110,000
Parking Garage equipment	1	LS	25,000.00	25,000
Built in Equipment				
Lobby/entry	1	LS	25,000.00	25,000
Core area	70,530	SF	0.75	52,898
Residential				
Livingrooms	141,050	SF	0.05	7,053
Bedrooms	164,565	SF	0.10	16,457
Bathrooms	47,020	SF	1.00	47,020
Kitchen	42,315	EA	6.00	253,890
Special use areas	6,236	SF	2.00	12,472
Residential appliances				
Kitchen appliances				
Refrigerator	310	EA	1,700.00	527,000
Range	310	EA	2,000.00	620,000
Range hood	310	EA	1,000.00	310,000
Double oven	310	EA	800.00	248,000
Dishwasher	310	EA	850.00	263,500
Microwave	310	EA	450.00	139,500
Washing machine	310	EA	1,200.00	372,000
Dryer - electric	310	EA	1,200.00	372,000
Window washing equipment	1	LS	450,000.00	450,000
				3,919,289

9. Stairs & Vertical Transportation

Stairs				
Regular stair flights	88	EA	22,000.00	1,936,000
Elevators				
Passenger Elevators, gearless traction	176	STOP	28,000.00	4,928,000
Freight Elevators, geared traction, 4 stop	8	STOP	32,000.00	256,000
				7,120,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
10. Plumbing Systems				
Sanitary fixtures and connection piping				
Toilets	736	EA	1,600.00	1,177,600
Lavatories	736	EA	1,200.00	883,200
Tub/shower combo	580	EA	1,800.00	1,044,000
Showers	232	EA	350.00	81,200
Kitchen sinks	310	EA	1,700.00	527,000
Washing machine connection	310	EA	350.00	108,500
Hose bibbs	10	EA	500.00	5,000
Domestic water and distribution				
Cold Water Service				
Copper piping incl. fittings >2"	900	LF	50.00	45,000
Copper piping incl. fittings to 2"	58,280	LF	32.00	1,864,960
Hot Water Service				
Copper piping incl. fittings >2"	1,400	LF	50.00	70,000
Copper piping incl. fittings to 2"	65,040	LF	32.00	2,081,280
Insulation	66,440	LF	9.00	597,960
Valves				
Isolation valves to 3/4"	4,772	EA	65.00	310,180
Domestic Water Supply Equipment				
Hot water heating and circulation	310	EA	900.00	279,000
Sanitary waste				
Waste & vent pipework-above ground				
Cast Iron No Hub, >6"	900	LF	75.00	67,500
Cast Iron No Hub, to 3"	58,280	LF	32.00	1,864,960
Sanitary waste, vent and service piping				
Floor Drains	88	EA	1,000.00	88,000
Rain Water Drainage				
Pipe and Fittings	51,583	LF	35.00	1,805,422
Roof/Overflow Drains	86	EA	750.00	64,695
Gas distribution				
Copper piping incl. fittings to 2"	2,000	LF	25.00	50,000
				13,015,457

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
11. Heating, Ventilation & Air Conditioning				
Heat generating systems				
Heating hot water boilers, high efficiency condensing: Core Area only	3,700	MBTH	25.00	92,500
Heating hot water pumps	2	EA	15,000.00	30,000
Cooling Generating Systems: Core Area only				
Cooling towers	500	TN	250.00	125,000
Chillers, 2 each	500	TN	450.00	225,000
Chilled water pumps	2	EA	10,000.00	20,000
Condenser water pumps	2	EA	5,000.00	10,000
Variable speed drives, vibration isolation, etc.	6	EA	12,000.00	72,000
Distribution systems: Core Area only				
Piping, fittings, valves and insulation				
Chilled water				
Chilled water pipework, fittings	1,400	LF	95.00	133,000
Valves and specialties	1	LS	75,000.00	75,000
Heating hot water				
Heating hot water pipework, fittings, including insulation				
6" - 4"	1,200	LF	85.00	102,000
< = 3"	4,000	LF	30.00	120,000
Valves and specialties	1	LS	25,000.00	25,000
Condenser water				
Condenser water pipework, fittings	1,200	LF	90.00	108,000
Valves and specialties	1	LS	25,000.00	25,000
Connections to Fan Coil Boxes	164	EA	350.00	57,236
Air handling equipment				
Dedicated outside air supply air handler	220,000	CFM	5.00	1,100,000
Individual unit packaged units	310	EA	6,000.00	1,860,000
Fan Coil Units				
Core/Shell	164	EA	1,250.00	204,415
Parking area	207	EA	1,250.00	258,750
Sound attenuation - duct mounted	220,000	CFM	0.25	55,000
Air distribution, return and exhaust				
Galvanized sheet metal ductwork	288,790	LB	8.00	2,310,320
Dryer exhaust duct	9,300	LF	6.00	55,800
Flexible ductwork	3,000	LF	6.00	18,000
Dampers, volume	100	EA	40.00	4,000
Dampers, smoke/fire	80	EA	1,200.00	96,000
Insulation/duct liner	100,000	SF	2.50	250,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Diffusers, registers and grilles				
Ceiling				
Core/Shell	818	EA	200.00	163,532
Tenant areas, 1 per 150 USF	2,633	EA	150.00	394,950
Parking area				
Terminal & Package Units				
Exhaust fans at toilet rooms	736	EA	350.00	257,600
Controls and instrumentation				
DDC Control system	288,790	SF	3.00	866,370
Test and balance				
Test and balance	288,790	SF	1.25	360,988
				9,475,461

12. Electrical Lighting, Power & Communication

Primary Service, Medium voltage				
Switchgear 13.8KV including (2) tie breakers, (2) feeder breakers, and customer metering	6,000	KVA	60.00	360,000
Transformer substation 13.8KV/110-208V, double-ended including secondary distribution	6,000	KVA	150.00	900,000
Distribution switchboards - 110-208V	18,600	AMP	25.00	465,000
Distribution panelboards - 208V	310	EA	1,500.00	465,000
Feeder conduit and wire - 600V	45,000	LF	80.00	3,600,000
Emergency and Uninterrupted Power				
Emergency Generator	1,500	KVA	350.00	525,000
Automatic transfer switch	1,500	AMP	45.00	67,500
Distribution panelboards	1,500	AMP	25.00	37,500
General Purpose Lighting				
Panelboards	46	EA	2,500.00	115,000
Lighting				
Core Area	81,766	SF	12.00	981,192
Tenant Area	394,950	SF	2.00	789,900
Parking area	207,024	SF	4.00	828,096

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Machine and Equipment Power				
Connections and switches including conduit and wire				
Elevators	16	EA	1,000.00	16,000
Cooling towers	2	EA	5,000.00	10,000
Chillers	2	EA	12,000.00	24,000
Pumps	6	EA	2,000.00	12,000
Miscellaneous connections	683,748	SF	0.75	512,811
User Convenience Power				
Panelboards	46	EA	2,500.00	115,000
Receptacles				
Core/Shell	81,766	SF	3.00	245,298
Tenant Area	394,950	SF	3.00	1,184,850
Parking area	207,024	SF	2.00	414,048
Communications				
Telephone and communications				
Core Area, panels and backbone only	1	LS	75,000.00	75,000
Tenant Units	310	EA	800.00	248,000
Security Systems				
Main Security System	683,748	SF	0.10	68,375
Tenant Units	310	EA	900.00	279,000
Fire Alarm Systems				
Main Fire Alarm Systems	683,748	SF	3.00	2,051,244
Other Electrical Systems				
Grounding Systems	683,748	SF	0.25	170,937
Lightning protection	1	LS	25,000.00	25,000
				14,585,751

13. Fire Protection Systems

Sprinkler and Standpipe Systems				
Fire Protection Sprinkler Systems	683,748	SF	4.00	2,734,992
Standpipe and Hose Systems	683,748	SF	1.00	683,748
Specialties and Other Systems				
Smoke Evacuation	1	LS	250,000.00	250,000
				3,668,740

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
<u>14. Site Preparation & Building Demolition</u>				
Site Preparation	100,000	SF	15.00	1,500,000
				1,500,000
<u>15. Site Paving, Structures & Landscaping</u>				
Site Development	48,244	SF	25.00	1,206,100
				1,206,100
<u>16. Utilities on Site</u>				
Site Utilities	1	LS	500,000.00	500,000
				500,000

PERFORMANCE BASED PLUS COMPONENT SUMMARY

		Gross Area: 683,748 SF	
		\$/SF	\$x1,000
1. Foundations		18.60	12,719
2. Vertical Structure		19.73	13,489
3. Floor & Roof Structures		30.96	21,167
4. Exterior Cladding		33.35	22,803
5. Roofing, Waterproofing & Skylights		3.69	2,526
Shell (1-5)		106.33	72,704
6. Interior Partitions, Doors & Glazing		24.75	16,922
7. Floor, Wall & Ceiling Finishes		21.25	14,530
Interiors (6-7)		46.00	31,452
8. Function Equipment & Specialties		5.73	3,919
9. Stairs & Vertical Transportation		10.41	7,120
Equipment & Vertical Transportation (8-9)		16.15	11,039
10. Plumbing Systems		19.04	13,015
11. Heating, Ventilating & Air Conditioning		13.86	9,475
12. Electric Lighting, Power & Communications		21.33	14,586
13. Fire Protection Systems		5.37	3,669
Mechanical & Electrical (10-13)		59.59	40,745
Total Building Construction (1-13)		228.07	155,941
14. Site Preparation & Demolition		2.19	1,500
15. Site Paving, Structures & Landscaping		1.76	1,206
16. Utilities on Site		0.73	500
Total Site Construction (14-16)		4.69	3,206
TOTAL BUILDING & SITE (1-16)		232.76	159,147
General Conditions	12.00%	27.93	19,098
Contractor's Overhead & Profit or Fee	6.00%	15.64	10,695
PLANNED CONSTRUCTION COST		March 2010	276.33
Design, Management and Inspection	20.00%	55.27	37,788
Escalation is excluded	0.00%	0.00	0
RECOMMENDED BUDGET		March 2010	331.60
			226,728

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
1. Foundations				
Basement Excavation				
Excavation	99,173	CY	15.00	1,487,595
Shoring at perimeter	36,400	SF	50.00	1,820,000
Backfill with imported material	14,829	CY	35.00	519,015
Dispose off site	99,173	CY	20.00	1,983,460
Hazardous material remediation				
Foundations				
Reinforced concrete Mat foundation				
Excavation and disposal	13,044	CY	15.00	195,660
Formwork	7,640	SF	18.00	137,520
Reinforcing steel	1,953,123	LBS	1.15	2,246,091
Concrete, f'c= 6ksi	13,044	CY	325.00	4,239,300
Elevator pits	6	EA	15,000.00	90,000
				12,718,641
2. Vertical Structure				
Columns and pilasters				
Concrete columns				
Forwork	99,875	SF	25.00	2,496,875
Reinforcing steel	972,895	LBS	1.25	1,216,119
Concrete, f'c= 8ksi	2,048	CY	350.00	716,800
Concrete retaining walls				
Concrete retaining wall				
Formwork to one side	36,400	SF	15.00	546,000
Reinforcing steel	240,240	LBS	1.25	300,300
Concrete, f'c= 5ksi	1,978	CY	225.00	445,050
Concrete core walls				
Formwork to both sides	157,864	SF	18.00	2,841,552
Reinforcing steel	1,961,782	LBS	1.25	2,452,228
Concrete, f'c= 8ksi	7,069	CY	350.00	2,474,150
				13,489,073

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
3. Floor and Roof Structure				
Floor at lowest level				
Slab on grade - See foundations (mat slab)				
Suspended floors				
10" thick reinforced concrete flat slab - basement slabs				
Formwork	155,268	SF	10.00	1,552,680
Reinforcing steel	768,577	LBS	1.25	960,721
Concrete, f'c= 5.5ksi	4,792	CY	225.00	1,078,200
8" thick post tensioned slabs				
Formwork	463,874	SF	10.00	4,638,740
Reinforcing steel	1,122,575	LBS	1.25	1,403,219
Post tension tendons	459,236	LBS	2.00	918,472
Studrails at columns (9 studrais with 9 studs per rail)	1,476	LOC	4,000.00	5,904,000
Concrete, f'c= 5.5ksi	12,599	CY	225.00	2,834,775
Ground level slab/roof				
12" thick reinforced concrete flat slab - ground level				
Formwork	51,756	SF	10.00	517,560
Reinforcing steel	455,453	LBS	1.25	569,316
Concrete, f'c= 5.5ksi	2,109	CY	225.00	474,525
High roof				
10" thick reinforced concrete flat slab				
Formwork	12,850	SF	10.00	128,500
Reinforcing steel	70,675	LBS	1.25	88,344
Concrete, f'c= 5.5ksi	437	CY	225.00	98,325
				21,167,377

4. Exterior Cladding

Wall framing, furring and insulation				
Exterior wall framing	168,413	SF	8.00	1,347,304
Furring to interior face of retaining wall	36,000	SF	4.00	144,000
Insulation and vapor barrier	161,050	SF	1.50	241,575
Applied exterior finishes				
Exterior wall finish - curtain wall with spandrel panels	125,050	SF	120.00	15,006,000
Parapets & edge detailing	400	LF	250.00	100,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Interior finish to exterior walls Gypsum board, taped and sanded	161,050	SF	3.50	563,675
Windows, glazing and louvers Exterior wall finish - curtain wall with glazing	40,883	SF	120.00	4,905,960
Exterior doors, frames and hardware Glazed Doors & Entrances (allow revolving)	12	EA	35,000.00	420,000
Solid Exterior Doors	8	EA	3,000.00	24,000
Overhead Doors	2	EA	25,000.00	50,000
				22,802,514

5. Roofing, Waterproofing & Skylights

Waterproofing Waterproofing at slab on grade	49,940	SF	10.00	499,400
Waterproofing at retaining wall	42,912	SF	10.00	429,120
Waterproofing membrane under plaza	31,750	SF	15.00	476,250
Insulation Rigid insulation at roof	18,190	SF	6.00	109,140
Roofing Balconies & accessible roofs	31,750	SF	25.00	793,750
High roof	18,190	SF	12.00	218,280
				2,525,940

6. Interior Partitions, Doors & Glazing

Partition framing and cores CMU partitions at basement levels	1,656	LF	325.00	538,200
Core partitions	11,880	LF	90.00	1,069,200
Standard partitions	118,798	LF	72.00	8,553,456
Doors, frames & hardware Unit entrance doors	310	EA	2,250.00	697,500
Standard interior doors	2,680	EA	1,800.00	4,824,000
Closet doors at units - allow bi-fold	1,240	EA	1,000.00	1,240,000
				16,922,356

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
7. Floor, Wall & Ceiling Finishes				
Floors including base				
Lobby flooring	5,000	SF	35.00	175,000
Core circulation - allow carpet	70,530	SF	6.00	423,180
Residential				
Livingrooms - allow wood	141,050	SF	22.00	3,103,100
Bedrooms - allow carpet	164,565	SF	6.00	987,390
Kitchen - allow stone tile	42,315	SF	25.00	1,057,875
Bathrooms - allow ceramic tile	47,020	SF	20.00	940,400
Special use areas	6,236	SF	10.00	62,360
Concrete sealer at basement	207,024	SF	2.00	414,048
Walls				
Lobby	1	EA	75,000.00	75,000
Core circulation	141,060	SF	3.00	423,180
Residential				
Livingrooms	282,100	SF	2.00	564,200
Bedrooms	329,130	SF	1.00	329,130
Kitchen	84,630	SF	10.00	846,300
Bathrooms	94,040	SF	12.00	1,128,480
Special use areas	9,354	SF	12.00	112,248
Paint to concrete and CMU at basement	70,776	SF	1.00	70,776
Ceilings				
Lobby	5,000	SF	25.00	125,000
Core circulation	70,530	SF	12.00	846,360
Residential				
Livingrooms	141,050	SF	6.00	846,300
Bedrooms	164,565	SF	6.00	987,390
Kitchen	42,315	SF	6.00	253,890
Bathrooms	47,020	SF	6.00	282,120
Special use areas	6,236	SF	10.00	62,360
Paint to exposed structure at basement	207,024	SF	2.00	414,048
				14,530,135

8. Function Equipment & Specialties

Specialties				
Fire extinguisher cabinets	150	EA	450.00	67,500
Trash chute	1	EA	110,000.00	110,000
Parking Garage equipment	1	LS	25,000.00	25,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Built in Equipment				
Lobby/entry	1	LS	25,000.00	25,000
Core area	70,530	SF	0.75	52,898
Residential				
Livingrooms	141,050	SF	0.05	7,053
Bedrooms	164,565	SF	0.10	16,457
Bathrooms	47,020	SF	1.00	47,020
Kitchen	42,315	EA	6.00	253,890
Special use areas	6,236	SF	2.00	12,472
Residential appliances				
Kitchen appliances				
Refrigerator	310	EA	1,700.00	527,000
Range	310	EA	2,000.00	620,000
Range hood	310	EA	1,000.00	310,000
Double oven	310	EA	800.00	248,000
Dishwasher	310	EA	850.00	263,500
Microwave	310	EA	450.00	139,500
Washing machine	310	EA	1,200.00	372,000
Dryer - electric	310	EA	1,200.00	372,000
Window washing equipment	1	LS	450,000.00	450,000
				3,919,289

9. Stairs & Vertical Transportation

Stairs				
Regular stair flights	88	EA	22,000.00	1,936,000
Elevators				
Passenger Elevators, gearless traction	176	STOP	28,000.00	4,928,000
Freight Elevators, geared traction, 4 stop	8	STOP	32,000.00	256,000
				7,120,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
10. Plumbing Systems				
Sanitary fixtures and connection piping				
Toilets	736	EA	1,600.00	1,177,600
Lavatories	736	EA	1,200.00	883,200
Tub/shower combo	580	EA	1,800.00	1,044,000
Showers	232	EA	350.00	81,200
Kitchen sinks	310	EA	1,700.00	527,000
Washing machine connection	310	EA	350.00	108,500
Hose bibbs	10	EA	500.00	5,000
Domestic water and distribution				
Cold Water Service				
Copper piping incl. fittings >2"	900	LF	50.00	45,000
Copper piping incl. fittings to 2"	58,280	LF	32.00	1,864,960
Hot Water Service				
Copper piping incl. fittings >2"	1,400	LF	50.00	70,000
Copper piping incl. fittings to 2"	65,040	LF	32.00	2,081,280
Insulation	66,440	LF	9.00	597,960
Valves				
Isolation valves to 3/4"	4,772	EA	65.00	310,180
Domestic Water Supply Equipment				
Hot water heating and circulation	310	EA	900.00	279,000
Sanitary waste				
Waste & vent pipework-above ground				
Cast Iron No Hub, >6"	900	LF	75.00	67,500
Cast Iron No Hub, to 3"	58,280	LF	32.00	1,864,960
Sanitary waste, vent and service piping				
Floor Drains	88	EA	1,000.00	88,000
Rain Water Drainage				
Pipe and Fittings	51,583	LF	35.00	1,805,422
Roof/Overflow Drains	86	EA	750.00	64,695
Gas distribution				
Copper piping incl. fittings to 2"	2,000	LF	25.00	50,000
				13,015,457

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
11. Heating, Ventilation & Air Conditioning				
Heat generating systems				
Heating hot water boilers, high efficiency condensing: Core Area only	3,700	MBTH	25.00	92,500
Heating hot water pumps	2	EA	15,000.00	30,000
Cooling Generating Systems: Core Area only				
Cooling towers	500	TN	250.00	125,000
Chillers, 2 each	500	TN	450.00	225,000
Chilled water pumps	2	EA	10,000.00	20,000
Condenser water pumps	2	EA	5,000.00	10,000
Variable speed drives, vibration isolation, etc.	6	EA	12,000.00	72,000
Distribution systems: Core Area only				
Piping, fittings, valves and insulation				
Chilled water				
Chilled water pipework, fittings	1,400	LF	95.00	133,000
Valves and specialties	1	LS	75,000.00	75,000
Heating hot water				
Heating hot water pipework, fittings, including insulation				
6" - 4"	1,200	LF	85.00	102,000
< = 3"	4,000	LF	30.00	120,000
Valves and specialties	1	LS	25,000.00	25,000
Condenser water				
Condenser water pipework, fittings	1,200	LF	90.00	108,000
Valves and specialties	1	LS	25,000.00	25,000
Connections to Fan Coil Boxes	164	EA	350.00	57,236
Air handling equipment				
Dedicated outside air supply air handler	220,000	CFM	5.00	1,100,000
Individual unit packaged units	310	EA	6,000.00	1,860,000
Fan Coil Units				
Core/Shell	164	EA	1,250.00	204,415
Parking area	207	EA	1,250.00	258,750
Sound attenuation - duct mounted	220,000	CFM	0.25	55,000
Air distribution, return and exhaust				
Galvanized sheet metal ductwork	288,790	LB	8.00	2,310,320
Dryer exhaust duct	9,300	LF	6.00	55,800
Flexible ductwork	3,000	LF	6.00	18,000
Dampers, volume	100	EA	40.00	4,000
Dampers, smoke/fire	80	EA	1,200.00	96,000
Insulation/duct liner	100,000	SF	2.50	250,000

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Diffusers, registers and grilles				
Ceiling				
Core/Shell	818	EA	200.00	163,532
Tenant areas, 1 per 150 USF	2,633	EA	150.00	394,950
Parking area				
Terminal & Package Units				
Exhaust fans at toilet rooms	736	EA	350.00	257,600
Controls and instrumentation				
DDC Control system	288,790	SF	3.00	866,370
Test and balance				
Test and balance	288,790	SF	1.25	360,988
				9,475,461

12. Electrical Lighting, Power & Communication

Primary Service, Medium voltage				
Switchgear 13.8KV including (2) tie breakers, (2) feeder breakers, and customer metering	6,000	KVA	60.00	360,000
Transformer substation 13.8KV/110-208V, double-ended including secondary distribution	6,000	KVA	150.00	900,000
Distribution switchboards - 110-208V	18,600	AMP	25.00	465,000
Distribution panelboards - 208V	310	EA	1,500.00	465,000
Feeder conduit and wire - 600V	45,000	LF	80.00	3,600,000
Emergency and Uninterrupted Power				
Emergency Generator	1,500	KVA	350.00	525,000
Automatic transfer switch	1,500	AMP	45.00	67,500
Distribution panelboards	1,500	AMP	25.00	37,500
General Purpose Lighting				
Panelboards	46	EA	2,500.00	115,000
Lighting				
Core Area	81,766	SF	12.00	981,192
Tenant Area	394,950	SF	2.00	789,900
Parking area	207,024	SF	4.00	828,096

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
Machine and Equipment Power				
Connections and switches including conduit and wire				
Elevators	16	EA	1,000.00	16,000
Cooling towers	2	EA	5,000.00	10,000
Chillers	2	EA	12,000.00	24,000
Pumps	6	EA	2,000.00	12,000
Miscellaneous connections	683,748	SF	0.75	512,811
User Convenience Power				
Panelboards	46	EA	2,500.00	115,000
Receptacles				
Core/Shell	81,766	SF	3.00	245,298
Tenant Area	394,950	SF	3.00	1,184,850
Parking area	207,024	SF	2.00	414,048
Communications				
Telephone and communications				
Core Area, panels and backbone only	1	LS	75,000.00	75,000
Tenant Units	310	EA	800.00	248,000
Security Systems				
Main Security System	683,748	SF	0.10	68,375
Tenant Units	310	EA	900.00	279,000
Fire Alarm Systems				
Main Fire Alarm Systems	683,748	SF	3.00	2,051,244
Other Electrical Systems				
Grounding Systems	683,748	SF	0.25	170,937
Lightning protection	1	LS	25,000.00	25,000
				14,585,751

13. Fire Protection Systems

Sprinkler and Standpipe Systems				
Fire Protection Sprinkler Systems	683,748	SF	4.00	2,734,992
Standpipe and Hose Systems	683,748	SF	1.00	683,748
Specialties and Other Systems				
Smoke Evacuation	1	LS	250,000.00	250,000
				3,668,740

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
<u>14. Site Preparation & Building Demolition</u>				
Site Preparation	100,000	SF	15.00	1,500,000
				<hr/>
				1,500,000
<u>15. Site Paving, Structures & Landscaping</u>				
Site Development	48,244	SF	25.00	1,206,100
				<hr/>
				1,206,100
<u>16. Utilities on Site</u>				
Site Utilities	1	LS	500,000.00	500,000
				<hr/>
				500,000