



EN1: Energy Cost Budget Worksheet

Must be typewritten.

Do Not Submit Separately.
Must be incorporated in the drawing set.

1	Location Information Required for all applications.				
House No(s)	501	Street Name	WEST 30TH STREET		
Borough	MANHATTAN	Block	702	Lot	50
		BIN	1012456	CB No.	104
Work on Floor(s)	C,0-5,5M,6-34,34M,35-48,R			Apt/Condo No(s)	

2	Applicant Information Required for all applications.				
Last Name	TORRE	First Name	MARK	Middle Initial	R
Business Name	JAROS BAUM AND BOLLES			Business Telephone	212 5309300
Business Address	80 PINE STREET 12TH FLOOR			Business Fax	
City	NEW YORK	State	NY	Zip	10005
E-Mail	TORRER@JBB.COM			License Number	068484


Energy Model Inputs		
NYS approved energy model software:		
Envelope	Proposed Design Input	Budget (Standard Design) Input
Above-grade wall U-factor	U-0.212	U-0.064
Below-grade wall U-factor	C-1.14	C-1.14
Roof construction U-factor	U-0.044	U-0.048
Exterior floor U-factor	n/a	n/a
Slab-on-grade construction (yes/no)	yes	yes
Window-to-gross wall ratio	52%	40%
Average fenestration assembly U-factor	U-0.42 (tower); U-0.96 (lobby, atrium)	U-0.50
Average fenestration assembly SHGC	0.30 (tower); 0.71 (atrium); 0.84 (lobby)	0.40
Fixed shading devices (yes/no)	no	no
Automated movable shading devices (yes/no)	no	no
Lighting		
Average ambient lighting power density (W/SF)	0.79 (C&S); 0.22 (parking garage)	1.0 (C&S); 0.3 (parking garage)
Lighting occupant sensor controls (yes/no)	yes	no
Automatic daylighting controls (yes/no)	yes (lobby, atrium)	no
Exterior lighting power (tradable surfaces) (kW)	8.053	9.522
Exterior lighting power (non-tradable surfaces) (kW)	0	0
Heating, Ventilating & Air Conditioning		
Refrigeration equipment type	Electric centrifugal chillers • Four 1050 ton electric chillers (0.643 kW/ton; NPLV=0.404) at 42°F	Electric centrifugal chillers • Six 713 ton electric chillers (COP=6.1; 6.4 IPV; 0.576 kW/ton) at ARI conditions
Heating equipment type	Hot Water Boiler • Heating is provided by seven (7) 190 HP boilers. The boiler efficiency is 85% with modulating flame burners	Hot Water Boiler • Heating is provided by two 30.15 MMBH boilers. The boiler efficiency is 80% with ON-OFF control
Demand controlled ventilation (yes/no)	yes; CO sensors in garage	no
Economizer type (air or water)	air-side and water-side	air-side and water-side
Domestic hot water heating source	DHW is served via boiler water.	hot water heater with 80% efficiency

Unregulated Energy	Proposed Design Input	Budget (Standard Design) Input
Average Receptacle equipment power density (W/SF)	1.13	1.13
Average Unregulated lighting power density (W/SF)	1.1 (tenant lighting W / tenant area)	1.1 (tenant lighting W / tenant area)
Other process loads	0	0

Energy Cost Budget Conformance	Proposed Design Output	Budget (Standard Design) Output
Annual Regulated Energy Cost (\$)	3,750,916 (including cogeneration)	4,318,152
Annual Regulated Energy Use (BTU/GSF)	59,347 (site, w/ cogn); 117,613 (source, w/ cogn)	54,003 (site); 131,879 (source)
Annual Regulated Energy Cost Per Sq. Ft. (\$/GSF)	2.18 (including cogeneration)	2.51

Energy Model Output Breakdown		
Energy Use Breakdown	Proposed Design Output (% BTU/yr)	Budget (Standard Design) Output (% BTU/yr)
Heating	29.28 (site, w/o cogen); 11.60 (source, w/o cogen)	30.96 (site); 12.48 (source)
Cooling	6.40 (site, w/o cogen); 8.00 (source, w/o cogen)	5.39 (site); 6.83 (source)
Heat rejection	1.93 (site, w/o cogen); 2.42 (source, w/o cogen)	3.53 (site); 4.47 (source)
Fans	11.61 (site, w/o cogen); 14.51 (source, w/o cogen)	8.81 (site); 11.17 (source)
Pumps	4.40 (site, w/o cogen); 5.50 (source, w/o cogen)	3.22 (site); 4.09 (source)
Lighting	23.68 (site, w/o cogen); 29.60 (source, w/o cogen)	26.64 (site); 33.77 (source)
Unregulated loads (e.g., plug loads, elevators, escalators, kitchen, process equipment, exterior lighting)	22.70 (site, w/o cogen); 28.37 (source, w/o cogen)	21.45 (site); 27.20 (source)
Total	100%	100%

Falsification of any statement is a misdemeanor under § 26-124 of the NYC Administrative Building Code and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (please print) <i>Mark Torre</i>	
Signature <i>[Signature]</i>	Date <i>3/25/13</i>
	
P.E. / R.A. Seal (apply seal then sign and date over seal)	