

# NATIONAL ACCELERATOR LABORATORY

## BUILDING 024 REMODEL

Stanford  
California

60% CDR

## COST ESTIMATE - RECONCILED

April 29th, 2009



111 Pine Street  
Suite 1315  
San Francisco  
CA, 94111

SLAC NAL  
Palo Alto  
California

**BASIS OF ESTIMATE**

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**REFERENCE DOCUMENTATION**

This Cost Model Estimate was produced from the following documentation and adjusted following reconciliation with Davis Langdon on 4/22/09

<u>Document</u>	<u>Date</u>
60% Conceptual Design Report - RMW architecture & interiors	30-Mar-09

**BASIS FOR PRICING**

This estimate reflects the fair construction value for this project and should not be construed as a prediction of low bid. Prices are based on local prevailing wage construction costs at the time the estimate was prepared. Pricing assumes a procurement process with competitive bidding for all sub-trades of the construction work, which is to mean a minimum of 3 bids for all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead, home office overhead and subcontractor's profit. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions.

General Contractor's/Construction Manager's Site Requirement costs are calculated on a percentage basis. General Contractor's/Construction Manager's Jobsite Management costs are also calculated on a percentage basis.

General Contractor's overhead and fees are based on a percentage of the total direct costs and include general conditions, contractor's bond, insurance, site office overheads and profit.

Unless identified otherwise, the cost of such items as overtime, shift premiums and construction phasing are not included in the line item unit price.

This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs. TBD Consultants have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. Therefore TBD Consultants do not guarantee that the bids received will not vary from this cost estimate.

**CONTINGENCY**

Design Contingency 10%

The Design Contingency is carried to cover scope that lacks definition and scope that is *anticipated* to be added to the Design. As the Design becomes more complete the Design Contingency will reduce.

Construction Contingency 0% *Carried else where in owners budget*

The Construction Contingency is carried to cover the unforeseen during construction execution and Risks that do not currently have mitigation plans. As Risks are mitigated, Construction Contingency can be reduced, but should not be eliminated.

An owners contingency has not been included in this construction cost estimate, but it is advised that the owner carry additional contingency to cover scope change, claims and delays.

**BASIS OF ESTIMATE**

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**ESCALATION**

Escalation has been added to the estimate to reflect the anticipated increases in labor and materials up until the mid point of construction. Escalation is calculated as being compound and has been calculated using the following assumed rates of

Escalation Per Year

<u>Year</u>	<u>Escalation</u>
2009	0.00%
2010	3.00%
2011	4.00%
2012	5.00%
2013	6.00%

**MARKET BID FACTOR**

We have excluded any Market Bid Factor from the estimate due to the anticipated time of bidding being more than 12 months from todays date. A market bid factor is currently used to reflect the competitiveness of bid results due to the current construction industry market conditions. Recent bid returns have necessitated including this adjusting factor, with very competitive bids expected for the coming few months and possibly beyond.

**EXCLUSIONS**

- Land acquisition, feasibility studies, financing costs and all other owner costs
- All professional fees and insurance
- Items identified in the design as Not In Contract [NIC]
- Hazardous materials investigations
- Utility company back charges, including work required off-site and utilities rates
- Work to site, outwith limit of work line
- Owners soft costs
- Owners contingency
- Security CCTV system
- Audio Visual Equipment
- UPS systems

**OVERALL SUMMARY**

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**OVERALL SUMMARY**

	<b>Area</b>	<b>Cost</b>	<b>Cost/SF</b>	<b>Comment</b>
Building 024 Remodel	9,349 SF	\$4,367,254	\$467	
<b>TOTAL</b>	<b>9,349 GSF</b>	<b>\$4,367,254</b>	<b>\$467</b>	

**KEY CRITERIA**

**AREA TABULATION**

Floor	Area	Perimeter	Height	Comment
Level 1	7,267	0	14.00	
Level 2	2,082	0	14.00	
Level 3	0	0	0.00	
Roof Mechanical	0	0	0.00	
<b>TOTAL</b>	<b>9,349 GSF</b>	<b>0 LF</b>	<b>28.00 LF</b>	

**BUILDING CRITERIA**

Building Footprint	7,267	SF	Roof Area	N/A	SF
Total Site Area	N/A	SF	Façade Area	N/A	SF
Net Site Area	N/A	SF	Site Perimeter	N/A	LF
Planned Occupancy	N/A	HC			

**BUILDING METRICS [un-escalated]**

Skin to Floor Ratio	N/A	%	Area / Occupant	N/A	GSF / HC
Glazed Skin %	N/A	%	Partition Length / GSF	N/A	LF / GSF
Building Cost / GSF	467	\$/GSF	Building Cost / Occupant	N/A	\$/HC
Sitework Cost / Site Area	N/A	\$/SF			

**CONSTRUCTION SCHEDULE**

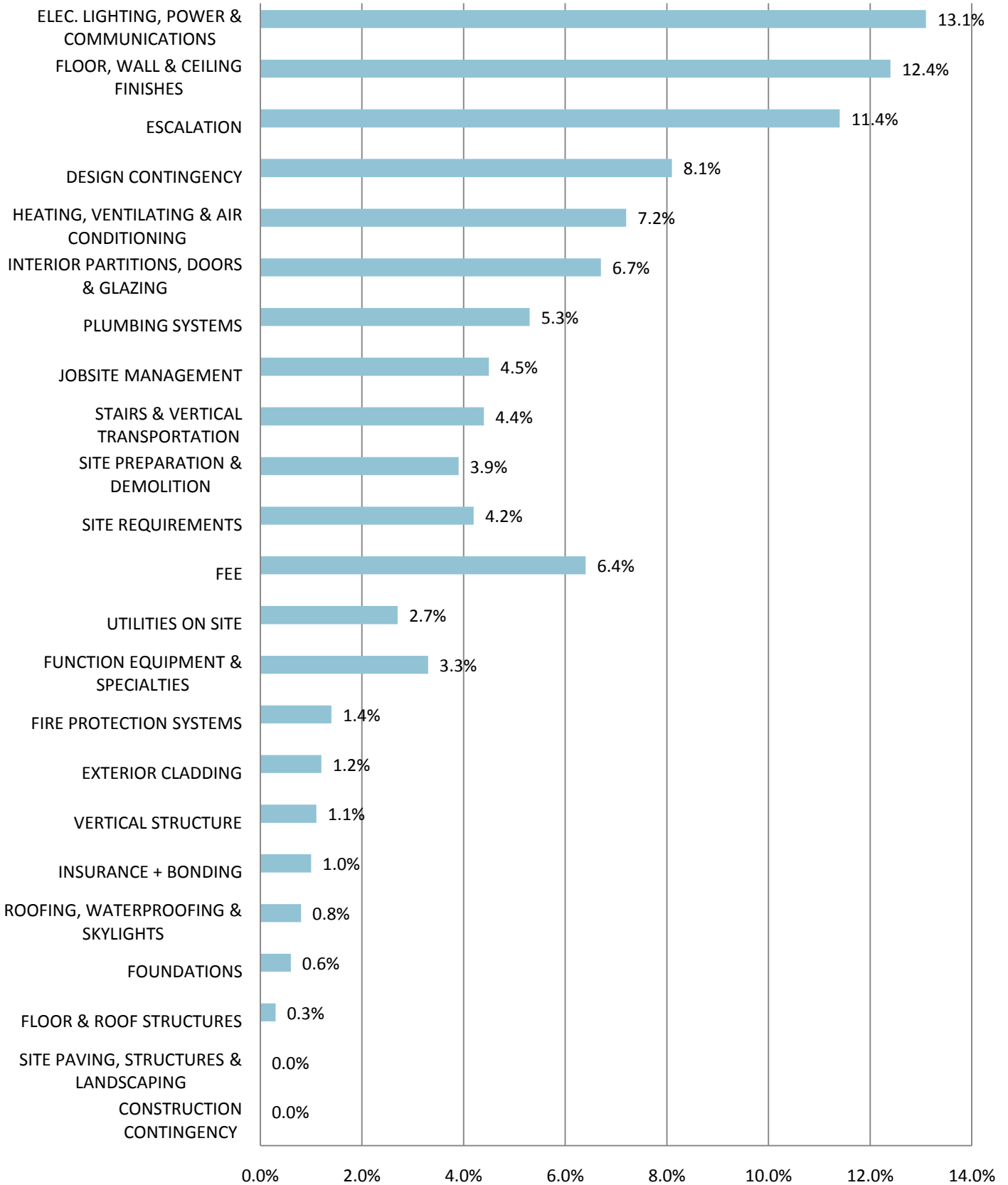
Construction Start Date	Apr-13	Construction End Date	Dec-13
Mid-date of Construction	Aug-13	Construction Duration	8 months
Escalation Period	47 months		

**BUILDING COMPONENT SUMMARY**

**GSF :** 9,349

SECTION	%	TOTAL	\$ / SF	COMMENTS
1 FOUNDATIONS	0.9%	25,000	2.67	
2 VERTICAL STRUCTURE	1.8%	50,000	5.35	
3 FLOOR & ROOF STRUCTURES	0.5%	14,975	1.60	
4 EXTERIOR CLADDING	1.8%	50,920	5.45	
5 ROOFING, WATERPROOFING & SKYLIGHTS	1.2%	33,800	3.62	
<b>SHELL (1-5)</b>	<b>6.2%</b>	<b>174,695</b>	<b>18.69</b>	
6 INTERIOR PARTITIONS, DOORS & GLAZING	10.4%	291,396	31.17	
7 FLOOR, WALL & CEILING FINISHES	19.3%	541,832	57.96	
<b>INTERIORS (6-7)</b>	<b>29.6%</b>	<b>833,228</b>	<b>89.12</b>	
8 FUNCTION EQUIPMENT & SPECIALTIES	5.1%	143,804	15.38	
9 STAIRS & VERTICAL TRANSPORTATION	6.8%	190,500	20.38	
<b>EQUIPMENT &amp; VERTICAL TRANSPORTATION (8-9)</b>	<b>11.9%</b>	<b>334,304</b>	<b>35.76</b>	
10 PLUMBING SYSTEMS	8.3%	232,491	24.87	
11 HEATING, VENTILATING & AIR CONDITIONING	11.2%	315,748	33.77	
12 ELEC. LIGHTING, POWER & COMMUNICATIONS	20.3%	571,284	61.11	
13 FIRE PROTECTION SYSTEMS	2.2%	60,769	6.50	
<b>MECHANICAL &amp; ELECTRICAL (10-13)</b>	<b>42.0%</b>	<b>1,180,292</b>	<b>126.25</b>	
<b>TOTAL BUILDING CONSTRUCTION (1-13)</b>		<b>2,522,519</b>	<b>269.82</b>	
14 SITE PREPARATION & DEMOLITION	6.1%	171,282	18.32	
15 SITE PAVING, STRUCTURES & LANDSCAPING	0.1%	1,500	0.16	
16 UTILITIES ON SITE	4.2%	117,744	12.59	
<b>TOTAL SITE CONSTRUCTION</b>	<b>10.3%</b>	<b>290,526</b>	<b>31.08</b>	
<b>TOTAL BUILDING &amp; SITE</b>		<b>2,813,045</b>	<b>300.89</b>	
SITE REQUIREMENTS	6.5%	182,848	19.56	\$22,856 per month
JOBSITE MANAGEMENT	7.0%	196,913	21.06	\$24,614 per month
INSURANCE + BONDING	1.5%	42,196	4.51	
FEE	10.0%	281,305	30.09	
<b>PLANNED CONSTRUCTION COST</b>		<b>3,516,307</b>	<b>376.12</b>	
DESIGN CONTINGENCY	10.0%	351,631	37.61	
CONSTRUCTION CONTINGENCY				Excluded
ESCALATION	14.2%	499,316	53.41	Start date April 2013
<b>RECOMMENDED BUDGET</b>		<b>4,367,254</b>	<b>467.14</b>	total add-ons 55.25%

## Cost Distribution



ESTIMATE DETAIL

GSF : 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
1	<u>Standard Foundations</u>					
2	N/A					
3						
4	<u>Other Foundations</u>					
5	Form new elevator pit	1	EA	25,000.00	25,000	
6						
7						
8	<b>FOUNDATIONS</b>				<b>25,000</b>	<b>\$2.67 / SF</b>
9						
10	<u>Steel Frame</u>					
11	Allow for structure to support new stairs and elevator	1	LS	50,000.00	50,000	
12						
13						
14	<b>VERTICAL STRUCTURE</b>				<b>50,000</b>	<b>\$5.35 / SF</b>
15						
16						
17	<u>Slab On Grade</u>					subtotal \$9,675, \$1 / sf
18	Allow for cutting and patching (E) SOG at new elevator shaft	1	LS	5,000.00	5,000	
19	Allow for repairs to (E) SOG	9,349	SF	0.50	4,675	
20						
21	<u>2nd Floor</u>					
22	Cut opening for new elevator shaft	100	SF	25.00	2,500	
23	Forming small openings in floor for services	8	EA	100.00	800	allowance
24	Forming medium openings in floor for services	3	EA	200.00	600	allowance
25						
26	<u>Roof</u>					
27	Forming small openings in roof for services	8	EA	100.00	800	allowance
28	Forming medium openings in roof for services	3	EA	200.00	600	allowance
29						
30						
31	<b>FLOOR &amp; ROOF STRUCTURES</b>				<b>14,975</b>	<b>\$1.6 / SF</b>
32						
33	<u>Exterior Walls</u>					
34	Allow for minor repairs to (E) walls	1	LS	2,000.00	2,000	allowance
35	Allow for forming new entrance	288	SF	50.00	14,400	
36	Allow for caulking and sealants	1	LS	600.00	600	allowance
37						
38	<u>Exterior Windows</u>					
39	New storefront at new entrance	288	SF	90.00	25,920	allowance
40						
41	<u>Exterior Doors</u>					
42	Glazed entrance door, double	1	PR	8,000.00	8,000	allowance
43						
44						
45	<b>EXTERIOR CLADDING</b>				<b>50,920</b>	<b>\$5.45 / SF</b>
46						
47	<u>Roof Coverings</u>					subtotal \$27,000, \$3 / sf
48	Allow for patching (E) roof system	1	LS	10,000.00	10,000	allowance
49	Allow for replacement of roof flashings	400	LF	20.00	8,000	allowance
50	Allow for new roof walk pads	300	SF	5.00	1,500	allowance
51	Allow for roof equipment pads	1	LS	7,500.00	7,500	allowance
52						
53	<u>Roof Openings</u>					
54	Allow for forming + flashing roof penetrations	1	LS	2,000.00	2,000	allowance
55						
56	<u>Waterproofing</u>					
57	Allow for waterproofing at elevator pit	400	SF	12.00	4,800	
58						
59						
60	<b>ROOFING, WATERPROOFING &amp; SKYLIGHTS</b>				<b>33,800</b>	<b>\$3.62 / SF</b>



ESTIMATE DETAIL

GSF : 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
61						
62	<u>Partitions</u>					subtotal \$228,196, \$25 / sf
63	Interior partitions, 4" metal stud, gyproc	3,410	SF	11.00	37,510	
64	Interior partitions, 6" metal stud, gyp, insulation	7,851	SF	14.00	109,914	
65	Shaftwall at elevator	1,110	SF	17.00	18,870	
66	Plumbing wall	720	SF	18.00	12,960	
67	Seal head of partition with insulation	930	LF	6.00	5,580	allowance
68	Furring to interior face of exterior walls	4,766	SF	7.00	33,362	allowance
69	Caulking and sealants	1	LS	5,000.00	5,000	allowance
70	Allow for blocking and bracing within walls	1	LS	5,000.00	5,000	allowance
71						
72	<u>Interior Doors</u>					subtotal \$59,600, \$6 / sf
73	Interior wood doors, single	24	EA	1,800.00	43,200	
74	Interior HM doors, single	4	EA	1,650.00	6,600	
75	Premium for lead shielding	6	EA	800.00	4,800	
76	Allow for security hardware	1	LS	5,000.00	5,000	
77						
78	<u>Interior Glazing</u>					
79	Allow for interior glazed screens, sidelites	72	SF	50.00	3,600	allowance
80						
81						
82	<b>INTERIOR PARTITIONS, DOORS &amp; GLAZING</b>				<b>291,396</b>	<b>\$31.17 / SF</b>
83						
84	<u>Wall Finishes</u>					subtotal \$169,445, \$18 / sf
85	Paint to walls	80,381	SF	1.00	80,381	
86	Allow for touch up	1	LS	20,000.00	20,000	allowance
87	Ceramic tile to restrooms	1,504	SF	16.00	24,064	
88	Allow for acoustical wall panels	1,000	SF	25.00	25,000	allowance
89	Allow for specialty wall finishes	1	LS	20,000.00	20,000	allowance
90						
91	<u>Floor Finishes</u>					subtotal \$242,573, \$26 / sf
92	Sealed concrete	121	SF	2.00	242	electrical rooms
93	Allow for carpet tile/VCT to general areas	31,887	SF	5.00	159,435	laid over (E) floor
94	Stone floor to lobby	403	SF	70.00	28,210	lobby only
95	Ceramic toilet to restrooms	352	SF	16.00	5,632	
96	Allow for preparing (E) slab to receive new finish	9,349	SF	2.00	18,698	
97	Stone base	105	LF	70.00	7,350	lobby
98	Resilient base	7,933	LF	2.90	23,006	
99						
100	<u>Ceiling Finishes</u>					subtotal \$122,139, \$13 / sf
101	Gypsum board ceilings	2,378	SF	11.00	26,158	above labs + toilets
102	Gypsum board soffits	200	LF	40.00	8,000	allowance
103	Allow for patching and repairing (E) ceilings as necessary	31,887	SF	1.50	47,831	allowance
104	Allow for lobby ceiling	403	SF	50.00	20,150	allowance
105	Allow for specialty ceiling finishes	1	LS	20,000.00	20,000	allowance
106						
107	<u>Miscellaneous Finishes</u>					
108	Allow for miscellaneous painting	9,349	SF	0.50	4,675	allowance
109	Allow for transitions and thresholds	1	LS	3,000.00	3,000	allowance
110						
111						
112	<b>FLOOR, WALL &amp; CEILING FINISHES</b>				<b>541,832</b>	<b>\$57.96 / SF</b>
113						
114	<u>Fittings</u>					subtotal \$63,709, \$7 / sf
115	Ladder at elevator pit	1	EA	2,500.00	2,500	
116	Allow for recessed fire extinguisher cabinets	4	EA	500.00	2,000	allowance
117	Toilet cubicles, regular	6	EA	1,200.00	7,200	
118	Toilet cubicles, disabled	4	EA	1,200.00	4,800	
119	Grab bars, 36"	4	EA	165.00	660	
120	Grab bars, 42"	4	EA	185.00	740	
121	Toilet tissue dispenser	10	EA	55.00	550	
122	Toilet seat cover dispenser	10	EA	185.00	1,850	
123	Coat hooks	10	EA	28.00	280	
124	Soap dispenser	6	EA	75.00	450	

ESTIMATE DETAIL

GSF : 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
125	Mirrors	120	SF	35.00	4,200	
126	Paper towel dispenser	6	EA	120.00	720	
127	Allow for whiteboards and marker boards	1	LS	5,000.00	5,000	
128	Allow for horizontal blinds at windows	360	SF	4.00	1,440	allowance
129	Allow for interior code signage	9,349	SF	0.35	3,272	allowance
130	Miscellaneous metals	9,349	SF	2.00	18,698	allowance
131	Rough carpentry	9,349	SF	1.00	9,349	allowance
132						
133	<u>Fixed Furnishings</u>					subtotal \$24,275, \$3 / sf
134	Vanity units	20	LF	200.00	4,000	
135	Base unit and counter	20	LF	350.00	7,000	allowance
136	Wall unit	20	LF	280.00	5,600	allowance
137	Allow for miscellaneous shelving	1	LS	3,000.00	3,000	
138	Allow for miscellaneous casework	9,349	SF	0.50	4,675	allowance
139						
140	<u>Moveable Furnishings</u>					subtotal \$51,145, \$5 / sf
141	Lab workstations	17	LF	200.00	3,400	
142	Lab workstation chairs	4	EA	250.00	1,000	
143	Allow for miscellaneous furnishings	9,349	SF	5.00	46,745	allowance
144						
145	<u>Equipment</u>					
146	Allow for installing OSCI equipment	9,349	SF	0.20	1,870	allowance
147	Allow for CSCI equipment	9,349	SF	0.30	2,805	allowance
148						
149	<b>FUNCTION EQUIPMENT &amp; SPECIALTIES</b>				<b>143,804</b>	<b>\$15.38 / SF</b>
150						
151	<u>Stair Construction</u>					subtotal \$92,500, \$10 / sf
152	Lobby stair and landings	1	FLT	40,000.00	40,000	
153	Glass balustrading at lobby stairs	65	LF	500.00	32,500	
154	Allow for upgrades to (E) stairs, replacing balustrading and handrails as necessary	2	FLT	10,000.00	20,000	allowance
155						
156	<u>Elevators + Lifts</u>					
157	Elevator, 2 stop	1	EA	90,000.00	90,000	3,500lb hydraulic
158	Allow for cab fit-out	1	EA	8,000.00	8,000	allowance
159						
160	<u>Escalators + Moving Walkways</u>					
161						
162	<u>Other Conveying Systems</u>					
163						
164						
165	<b>STAIRS &amp; VERTICAL TRANSPORTATION</b>				<b>190,500</b>	<b>\$20.38 / SF</b>
166						
167	<u>Sanitary fixtures</u>	20	FX			subtotal \$45,100, \$5 / sf
168	Fixtures, including local connection pipework	38	FX			
169	Waterclosets, dual flush	10	EA	2,200.00	22,000	
170	Urinals, waterless	2	EA	1,200.00	2,400	
171	Lavatories	8	EA	1,800.00	14,400	
172	Sensors	18	EA	350.00	6,300	
173						
174	<u>Sanitary and domestic water</u>					subtotal \$100,000, \$11 / sf
175	Rough-in for fixtures, including sanitary waste, vent, domestic hot/cold water, insulation	20	EA	5,000.00	100,000	
176	Water metering				Existing	
177	Reduce pressure backflow preventers - 2"				Existing	
178						
179	<u>Water treatment and circulation</u>					
180	Gas-fired water heater	1	EA	3,000.00	3,000	
181	Expansion tank	1	EA	300.00	300	
182	Circulation pump	1	EA	600.00	600	
183						
184	<u>Laboratory piping</u>	9,349	SF	5.00	46,745	
185	Modifications to existing. No equipment replacement					
186						
187	<u>Gas distribution</u>	1	LS	5,000.00	5,000	

ESTIMATE DETAIL

GSF : 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
188						
189	Roof water drainage				Existing	
190						
191	Reclaim water system and irrigation	1	LS	5,000.00	5,000	
192						
193	<u>Other Plumbing Systems</u>					
194	LEED Commissioning assistance	1	LS	4,114.90	4,115	2%
195	Miscellaneous plumbing	1	LS	6,172.35	6,172	Testing, Sterlization, flushing
196	Firestopping/core drilling	1	LS	2,057.45	2,057	
197	Project requirements (coordination, shop dwg, detailing, project management, material handling, security badging)	1	LS	14,402.15	14,402	
198						
199						
200	<b>PLUMBING SYSTEMS</b>				<b>232,491</b>	<b>\$24.87 / SF</b>
201						
202	<u>Heating/Cooling Generating Systems</u>					
203	Gas fired boilers				Reuse	
204	Cooling tower				Reuse	
205	Water cooled chillers				Reuse	
206	Non-chemical water treatment and seperator				Reuse	
207						
208	<u>Circulation pumps</u>					
209	Air seperators				Reuse	
210	Expansion tanks				Reuse	
211	Heated hot water pumps				Reuse	
212	Chilled water pumps				Reuse	
213	Variable frequency drives				Reuse	
214	Vibration isolation				Reuse	
215						
216	<u>Distribution Systems</u>					subtotal \$24,000, \$3 / sf
217	Chilled water piping	300	LF	60.00	18,000	
218	Valves and specialties					
219	Fancoils	3	EA	800.00	2,400	
220	Insulation	300	LF	12.00	3,600	
221						
222	<u>Terminal + Packaged Units</u>					subtotal \$15,000, \$2 / sf
223	2-pipe fancoils cooling only	3	EA	5,000.00	15,000	
224						
225	<u>Air distribution and return</u>					subtotal \$116,334, \$12 / sf
226	Galvanized sheet metal ductwork,	6,077	LBS	13.50	82,040	
227	Flexible ductwork	350	LF	13.00	4,550	
228	Volume dampers	70	EA	60.00	4,200	
229	Combination fire/smoke dampers - reinstall	4	EA	2,500.00	10,000	
230	Duct insulation	4,675	SF	2.80	13,090	
231	Acoustical lining	701	SF	3.50	2,454	
232						
233	<u>Diffusers, registers and grilles</u>					
234	Standard diffusers/grilles	9,349	SF	1.50	14,024	
235						
236	<u>Control + Instrumentation</u>					
237	Direct digital controls systems					
238	2-pipe fancoils cooling only	12	PTS	800.00	9,600	
239						
240	<u>Systems Testing + Balancing</u>					subtotal \$12,960, \$1 / sf
241	2-pipe fancoils cooling only	24	HR	135.00	3,240	
242	Diffusers, registers and grilles	35	HR	135.00	4,725	
243	Exhaust	16	HR	135.00	2,160	
244	Dryside	17	HR	135.00	2,295	
245	Wetside	4	HR	135.00	540	
246						
247	<u>Exhaust system</u>					subtotal \$90,000, \$10 / sf
248	Galvanized sheet metal ductwork,				Reuse	
249	Stainless steel exhaust ductwork	3,000	LBS	20.00	60,000	
250	Toilet exhaust fans				Reuse	
251	Fume hood exhaust	10,000	CFM	3.00	30,000	

**ESTIMATE DETAIL**

**GSF :** 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
252						
253	<u>Other HVAC Systems</u>					
254	LEED Commissioning assistance (Fundamental/Enhanced)	1	LS	8,457.54	8,458	3%
255	Seismic, vibration, acoustical	1	LS	2,819.18	2,819	1%
256	Firestopping/core drilling	1	LS	2,819.18	2,819	1%
257	Project requirements (coordination, shop dwg, detailing, project management, material handling, security badging)	1	LS	19,734.26	19,734	7%
258						
259						
260	<b>HEATING, VENTILATING &amp; AIR CONDITIONING</b>				<b>315,748</b>	<b>\$33.77 / SF</b>
261						
262	<u>Electrical Service + Distribution</u>					subtotal \$120,337, \$13 / sf
263	Remove existing main switchboard, replace with new	1	EA	30,000.00	30,000	
264	Reconnect existing loads to new switchboard	1	LS	6,000.00	6,000	
265	New 480/277V panels, feeders	2	EA	6,500.00	13,000	
266	New transformers	1	EA	7,500.00	7,500	
267	New 208/120V panels, feeders	4	EA	6,500.00	26,000	
268	Replace feeder wiring to existing panelboards to remain	1	LS	15,000.00	15,000	
269	Connect elevator	1	EA	6,500.00	6,500	
270	Connect mechanical equipment	8	EA	1,750.00	14,000	
271	Revise grounding as required	9,349	SF	0.25	2,337	
272						
273	<u>Lighting + Branch Wiring</u>					subtotal \$135,462, \$14 / sf
274	Supply, install light fixtures	160	EA	475.00	76,000	
275	Exit lights	10	EA	250.00	2,500	
276	Battery packs, integral to fixtures	40	EA	130.00	5,200	
277	Lighting back boxes	140	EA	26.00	3,640	
278	Lighting conduit, wire	2,200	LF	7.92	17,424	
279	Misc. lighting controls	9,349	SF	2.00	18,698	
280	Dimming in liquid scintillation counting room	1	LS	2,000.00	2,000	
281	Misc. electrical at revised lobby	1	LS	10,000.00	10,000	
282						
283	<u>User Convenience Power</u>					
284	Convenience outlets, surface mounted raceways etc.	9,349	SF	8.00	74,792	
285	Misc. equipment connections	9,349	SF	5.00	46,745	
286						
287	<u>Communications + Security</u>					subtotal \$84,141, \$9 / sf
288	Telephone/data					
289	Misc. infrastructure, J-hooks etc.	9,349	SF	2.00	18,698	
290	Cable, terminations	9,349	SF	7.00	65,443	
291						
292	<u>Fire Alarm</u>					
293	Modify as required	9,349	SF	2.50	23,373	
294						
295	<u>Security</u>					
296	Conduit, boxes	9,349	SF	0.50	4,675	
297	Devices, control panels, cabling	9,349	SF	2.50	23,373	
298						
299	<u>Audio/Visual</u>					
300	Conduit, boxes, cabling	9,349	SF	1.25	11,686	
301						
302	<u>Misc.</u>					subtotal \$46,700, \$5 / sf
303	Seismic bracing	1	LS	13,000.00	13,000	
304	Testing, commissioning	1	LS	13,000.00	13,000	
305	Coordination, documentation	1	LS	13,000.00	13,000	
306	Start-up	1	LS	5,200.00	5,200	
307	Trade demolition	1	LS	2,500.00	2,500	

ESTIMATE DETAIL

GSF : 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
308						
309	<u>CCTV</u>					
310						
311	<u>Clocks</u>					excluded - N/A
312						
313	<u>Paging</u>					excluded - N/A
314						
315	<u>Central UPS</u>					excluded - N/A
316						
317						
<b>318</b>	<b>ELEC. LIGHTING, POWER &amp; COMMUNICATIONS</b>				<b>571,284</b>	<b>\$61.11 / SF</b>
319						
320	<u>Sprinklers</u>					
321	Automatic wet sprinkler system	9,349	SF	6.50	60,769	
322						
323						
<b>324</b>	<b>FIRE PROTECTION SYSTEMS</b>				<b>60,769</b>	<b>\$6.5 / SF</b>
325						
326	<u>Building Elements Demolition</u>					
327	Allow for demolishing and clearing (E) areas	9,349	SF	10.00	93,490	
328						
329	<u>Hazardous Components Abatement</u>					
330	Allow for hazardous abatement	9,349	SF	8.00	74,792	
331						
332	<u>Site Clearing</u>					
333	Allow for clearing (E) site	1	LS	500.00	500	
334	Allow for site survey	1	LS	2,000.00	2,000	
335						
336	<u>Site Demolition + Relocations</u>					
337	Allow for site demolitions	1	LS	500.00	500	
338						
339	<u>Site Earthwork</u>					
340	N/A					
341						
342	<u>Hazardous Waste Remediation</u>					
343	Excluded					excluded
344						
345						
<b>346</b>	<b>SITE PREPARATION &amp; DEMOLITION</b>				<b>171,282</b>	<b>\$18.32 / SF</b>
347						
348						
349	<u>Parking Lots</u>					
350	Allow for restriping and resigning (E) parking stalls	1	LS	1,500.00	1,500	allowance
351						
352	<u>Pedestrian Paving</u>					
353	N/A					
354						
355	<u>Site Development</u>					
356	N/A					
357						
358	<u>Landscaping</u>					
359	N/A					
360						
361						
<b>362</b>	<b>SITE PAVING, STRUCTURES &amp; LANDSCAPING</b>				<b>1,500</b>	<b>\$0.16 / SF</b>
363						
364	<u>Water Supply</u>					
365	Connection to existing	1	LS	5,000.00	5,000	allowance
366						
367	<u>Sanitary Sewer</u>					
368	Connection to existing	1	LS	10,000.00	10,000	allowance

**ESTIMATE DETAIL**

**GSF :** 9,349

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
369						
370	<u>Storm Sewer</u>					
371	Connection to existing	1	LS	5,000.00	5,000	allowance
372						
373	<u>Heating Distribution</u>					
374	Connection to existing	1	LS	5,000.00	5,000	allowance
375						
376	<u>Cooling Distribution</u>					
377	Connection to existing	1	LS	5,000.00	5,000	allowance
378						
379	<u>Electrical Distribution</u>					
380	Replace existing incoming feeder , allow 300ft	600	LF	146.24	87,744	
381						
382	<u>Site Lighting</u>					
383	Not included, assume existing is adequate					
384						
385	<u>Site Communications + Security</u>					
386	Not included, assume existing is adequate					
387						
388	<u>Other Site Electrical Utilities</u>					
389	N/A					
390						
391	<u>Other Site Systems + Equipment</u>					
392	N/A					
393						
394						
395	<b>UTILITIES ON SITE</b>				<b>117,744</b>	<b>\$12.59 / SF</b>