

NATIONAL ACCELERATOR LABORATORY

BUILDING 041 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

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

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

OVERALL SUMMARY

	Area	Cost	Cost/SF	Comment
Office Remodel	48,126 SF	\$18,104,854	\$376	
TOTAL	48,126 GSF	\$18,104,854	\$376	

KEY CRITERIA

AREA TABULATION

Floor	Area	Perimeter	Height	Comment
Level 1	24,704	1,106	14.00	
Level 2	23,422	1,130	14.00	
Level 3	0	0	0.00	
Roof Mechanical	0	0	0.00	
TOTAL	48,126 GSF	1,130 LF	28.00 LF	

BUILDING CRITERIA

Building Footprint	24,704 SF	Roof Area	24,704 SF
Total Site Area	N/A SF	Façade Area	48,126 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	376 \$ / GSF	Building Cost / Occupant	N/A \$ / HC
Sitework Cost / Site Area	N/A \$ / SF		

CONSTRUCTION SCHEDULE

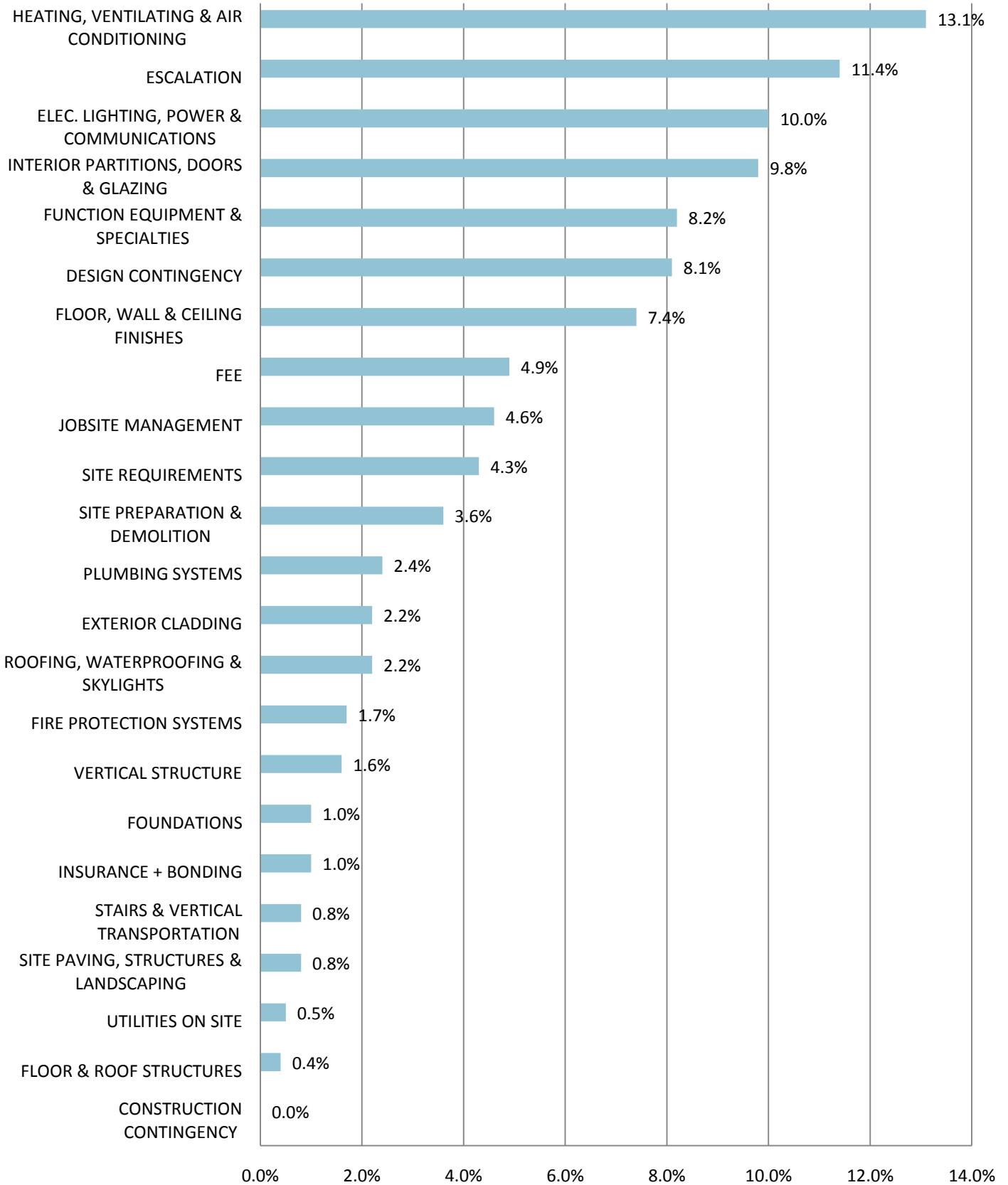
Construction Start Date	Feb-13	Construction End Date	Apr-14
Mid-date of Construction	Sep-13	Construction Duration	14 months
Escalation Period	47 months		

BUILDING COMPONENT SUMMARY

GSF : 48,126

SECTION	%	TOTAL	\$ / SF	COMMENTS
1 FOUNDATIONS	1.5%	176,470	3.67	
2 VERTICAL STRUCTURE	2.4%	283,950	5.90	
3 FLOOR & ROOF STRUCTURES	0.6%	66,712	1.39	
4 EXTERIOR CLADDING	3.4%	404,705	8.41	
5 ROOFING, WATERPROOFING & SKYLIGHTS	3.3%	397,044	8.25	
SHELL (1-5)	11.2%	1,328,881	27.61	
6 INTERIOR PARTITIONS, DOORS & GLAZING	14.9%	1,778,840	36.96	
7 FLOOR, WALL & CEILING FINISHES	11.2%	1,334,460	27.73	
INTERIORS (6-7)	26.2%	3,113,300	64.69	
8 FUNCTION EQUIPMENT & SPECIALTIES	12.4%	1,475,596	30.66	
9 STAIRS & VERTICAL TRANSPORTATION	1.2%	142,000	2.95	
EQUIPMENT & VERTICAL TRANSPORTATION (8-9)	13.6%	1,617,596	33.61	
10 PLUMBING SYSTEMS	3.6%	429,714	8.93	
11 HEATING, VENTILATING & AIR CONDITIONING	20.0%	2,378,174	49.42	
12 ELEC. LIGHTING, POWER & COMMUNICATIONS	15.3%	1,815,928	37.73	
13 FIRE PROTECTION SYSTEMS	2.6%	312,819	6.50	
MECHANICAL & ELECTRICAL (10-13)	41.5%	4,936,635	102.58	
TOTAL BUILDING CONSTRUCTION (1-13)		10,996,412	228.49	
14 SITE PREPARATION & DEMOLITION	5.5%	659,624	13.71	
15 SITE PAVING, STRUCTURES & LANDSCAPING	1.3%	153,700	3.19	
16 UTILITIES ON SITE	0.8%	90,000	1.87	
TOTAL SITE CONSTRUCTION	7.6%	903,324	18.77	
TOTAL BUILDING & SITE		11,899,736	247.26	
SITE REQUIREMENTS	6.5%	773,483	16.07	\$55,249 per month
JOBSITE MANAGEMENT	7.0%	832,982	17.31	\$59,499 per month
INSURANCE + BONDING	1.5%	178,496	3.71	
FEE	7.5%	892,480	18.54	
PLANNED CONSTRUCTION COST		14,577,177	302.90	
DESIGN CONTINGENCY	10.0%	1,457,718	30.29	
CONSTRUCTION CONTINGENCY				Excluded
ESCALATION	14.2%	2,069,959	43.01	Assume start date Feb 2013
RECOMMENDED BUDGET		18,104,854	376.20	total add-ons 52.15%

Cost Distribution



ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
1	<u>Standard Foundations</u>					
2	<u>Pad Footings</u>					
3	Allow for miscellaneous pad footings as required	1	LS	10,000.00	10,000	allowance
4						
5	<u>Strip Footings</u>					
6	Allow for new strip footings at new curtain walling	72	LF	460.00	33,120	
7	Allow for new strip footings at new shotcrete walls	250	LF	400.00	100,000	allowance
8	Allow for dowelling	167	EA	50.00	8,350	allowance
9						
10	<u>Other Foundations</u>					
11	Form new elevator pit	1	EA	25,000.00	25,000	
12						
13						
14	FOUNDATIONS				176,470	\$3.67 / SF
15						
16	<u>Steel Frame</u>					
17	Allow for new steel columns and bracing as required	10,000	LB	1.65	16,500	
18	Allow for bolts, plates, connections	1,500	LB	1.65	2,475	
19						
20	<u>Concrete walls</u>					subtotal \$264,975, \$6 / sf
21	Form openings in (E) courtyard walls	1,863	SF	25.00	46,575	
22	Form openings in (E) concrete walls	1,456	SF	25.00	36,400	
23	Shotcrete to remaining core walls at corners	190	CY	650.00	123,500	
24	Rebar to shotcrete walls, 150#/CY	28,500	LB	1.00	28,500	
25	Allow for dowels, formwork etc	1	LS	20,000.00	20,000	
26	Allow for test panel	1	LS	10,000.00	10,000	
27						
28	VERTICAL STRUCTURE				283,950	\$5.9 / SF
29						
30	<u>Slab On Grade</u>					subtotal \$56,912, \$1 / sf
31	Allow for cutting and patching (E) SOG at new elevator shaft	1	LS	5,000.00	5,000	
32	Allow for cutting and patching (E) SOG at shotcrete footings	250	LF	100.00	25,000	
33	Allow for repairs to (E) SOG	24,704	SF	0.50	12,352	
34	Allow for new SOG at lobby	1,040	SF	14.00	14,560	
35						
36	<u>2nd Floor</u>					subtotal \$7,400, \$ / sf
37	Cut opening for new elevator shaft	100	SF	50.00	5,000	
38	Forming small openings in floor for services	12	EA	100.00	1,200	allowance
39	Forming medium openings in floor for services	6	EA	200.00	1,200	allowance
40						
41	<u>Roof</u>					
42	Forming small openings in roof for services	12	EA	100.00	1,200	allowance
43	Forming medium openings in roof for services	6	EA	200.00	1,200	allowance
44						
45						
46	FLOOR & ROOF STRUCTURES				66,712	\$1.39 / SF
47						
48	<u>Exterior Walls</u>					subtotal \$63,490, \$4 / sf
49	Allow for minor repairs to (E) walls	1	LS	10,000.00	10,000	
50	Refinish (E) roof mechanical screen	3,898	SF	5.00	19,490	
51	Allow for elevator penthouse over-run	1	LS	30,000.00	30,000	
52	Allow for caulking and sealants	1	LS	4,000.00	4,000	
53						
54	<u>Exterior Windows</u>					subtotal \$187,215, \$4 / sf
55	Low-E clear glass curtain wall	1,783	SF	105.00	187,215	
56	Low-E clear glass curtain wall to courtyard	1,200	SF	105.00	126,000	
57						
58	<u>Exterior Doors</u>					subtotal \$28,000, \$1 / sf
59	Glazed entrance door, double	3	PR	8,000.00	24,000	
60	HM double door	1	PR	4,000.00	4,000	
61						
62						
63	EXTERIOR CLADDING				404,705	\$8.41 / SF

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
64						
65	<u>Roof Coverings</u>					subtotal \$390,244, \$16 / sf
66	Allow for new roof system	24,704	SF	13.50	333,504	allowance
67	Allow for replacement of roof flashings	2,212	LF	20.00	44,240	allowance
68	Allow for new roof walk pads	500	SF	5.00	2,500	allowance
69	Allow for roof equipment pads	1	LS	10,000.00	10,000	allowance
70						
71	<u>Roof Openings</u>					
72	Allow for forming + flashing roof penetrations	1	LS	2,000.00	2,000	allowance
73						
74	<u>Waterproofing</u>					
75	Allow for waterproofing at elevator pit	400	SF	12.00	4,800	
76						
77						
78	ROOFING, WATERPROOFING & SKYLIGHTS				397,044	\$8.25 / SF
79						
80	<u>Partitions</u>					subtotal \$1,060,090, \$22 / sf
81	Interior partitions, 4" metal stud, gyproc	34,307	SF	11.50	394,531	
82	Interior partitions, 6" metal stud, gyp, insulation	26,545	SF	14.00	371,630	
83	Interior partitions, 6" metal stud, 2 layers gyp, insulation	3,006	SF	17.00	51,102	
84	Shaftwall at elevator	977	SF	17.00	16,609	
85	Plumbing wall	875	SF	18.00	15,750	
86	Seal head of partition with insulation	2,326	LF	6.00	13,956	allowance
87	Furring to interior concrete walls	10,649	SF	8.00	85,192	
88	Furring to interior face of exterior walls	9,520	SF	7.00	66,640	
89	Form bulkhead above glazed screens	185	LF	40.00	7,400	
90	Insulation to exterior walls	9,520	SF	1.50	14,280	
91	Allow for blocking and bracing within walls	1	LS	8,000.00	8,000	allowance
92	Caulking and sealants	1	LS	15,000.00	15,000	allowance
93						
94	<u>Interior Doors</u>					subtotal \$384,550, \$8 / sf
95	Interior glazed doors, single	2	EA	2,000.00	4,000	
96	Interior wood doors, single	187	EA	1,800.00	336,600	
97	Interior HM doors, single	9	EA	1,650.00	14,850	
98	Interior wood doors, double	3	EA	3,600.00	10,800	
99	Interior HM doors, double	1	EA	3,300.00	3,300	
100	Allow for security hardware	1	LS	15,000.00	15,000	
101						
102	<u>Interior Glazing</u>					subtotal \$154,200, \$3 / sf
103	Glazed screens	2,500	SF	60.00	150,000	
104	Allow for interior glazed screens, sidelites	84	SF	50.00	4,200	allowance
105	Allow for clerestory glazing at perimeter offices	3,000	SF	60.00	180,000	allowance
106						
107	INTERIOR PARTITIONS, DOORS & GLAZING				1,778,840	\$36.96 / SF
108						
109	<u>Wall Finishes</u>					subtotal \$430,596, \$9 / sf
110	Paint to walls	115,420	SF	1.00	115,420	
111	Allow for touch up	1	LS	15,000.00	15,000	allowance
112	Ceramic tile to restrooms	3,136	SF	16.00	50,176	
113	Allow for acoustical wall panels	4,000	SF	25.00	100,000	allowance
114	Allow for specialty wall finishes	1	LS	150,000.00	150,000	allowance
115						
116	<u>Floor Finishes</u>					subtotal \$414,902, \$9 / sf
117	Sealed concrete	594	SF	2.00	1,188	electrical rooms
118	Allow for carpet tile/VCT to general areas	44,646	SF	5.00	223,230	
119	Stone floor to lobby, atrium and balcony	1,814	SF	70.00	126,980	lobby
120	Ceramic toilet to restrooms	1,072	SF	16.00	17,152	
121	Stone base	184	LF	70.00	12,880	lobby
122	Resilient base	11,542	LF	2.90	33,472	
123						
124	<u>Ceiling Finishes</u>					subtotal \$77,472, \$2 / sf
125	Gypsum board ceilings	4,000	SF	11.00	44,000	allowance
126	Gypsum board soffits	1,000	LF	40.00	40,000	allowance
127	ACT suspended ceiling system	44,126	SF	5.00	220,630	
128	Allow for specialty ceiling finishes	1	LS	150,000.00	150,000	allowance

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
129						
130	<u>Miscellaneous Finishes</u>					
131	Allow for miscellaneous painting	48,126	SF	0.60	28,876	allowance
132	Allow for transitions and thresholds	1	LS	3,000.00	3,000	allowance
133						
134	<u>Stair Finishes</u>					
135	Finish to treads	160	SF	8.00	1,280	allowance
136	Slip resistant stair nosing	168	LF	7.00	1,176	allowance
137						
138						
139	FLOOR, WALL & CEILING FINISHES				1,334,460	\$27.73 / SF
140						
141	<u>Fittings</u>					subtotal \$510,166, \$11 / sf
142	Ladder at elevator pit	1	EA	2,500.00	2,500	
143	Allow for recessed fire extinguisher cabinets	12	EA	500.00	6,000	
144	Toilet cubicles, regular	6	EA	1,200.00	7,200	
145	Toilet cubicles, disabled	4	EA	1,200.00	4,800	
146	Shower door	4	EA	1,000.00	4,000	
147	Grab bars, 36"	4	EA	165.00	660	
148	Grab bars, 42"	4	EA	185.00	740	
149	Shower grab bars, 48", L shape	4	EA	295.00	1,180	
150	Toilet tissue dispenser	10	EA	55.00	550	
151	Toilet seat cover dispenser	10	EA	185.00	1,850	
152	Coat hooks	10	EA	28.00	280	
153	Soap dispenser	14	EA	75.00	1,050	
154	Mirrors	120	SF	35.00	4,200	
155	Paper towel dispenser	8	EA	120.00	960	
156	Lockers	20	EA	300.00	6,000	
157	Allow for horizontal blinds at windows	4,367	SF	4.00	17,468	allowance
158	Allow for whiteboards and marker boards	1	LS	20,000.00	20,000	allowance
159	Allow for interior code signage	48,126	SF	0.35	16,844	allowance
160	Allow for interior signage	48,126	SF	0.60	28,876	allowance
161	Miscellaneous metals	48,126	SF	2.00	96,252	allowance
162	Miscellaneous specialties	48,126	SF	5.00	240,630	allowance
163	Rough carpentry	48,126	SF	1.00	48,126	allowance
164						
165	<u>Fixed Furnishings</u>					subtotal \$118,912, \$2 / sf
166	Vanity units	24	LF	200.00	4,800	
167	Base unit and counter	22	LF	350.00	7,700	
168	Wall unit	22	LF	280.00	6,160	
169	Allow for miscellaneous shelving	1	LS	4,000.00	4,000	allowance
170	Allow for miscellaneous casework	48,126	SF	2.00	96,252	allowance
171						
172	<u>Moveable Furnishings</u>					subtotal \$796,830, \$17 / sf
173	Lobby tables	6	EA	300.00	1,800	
174	Media room table	2	EA	400.00	800	
175	Conference room table, 6'	2	EA	1,250.00	2,500	
176	Conference room table, 12'	3	EA	2,000.00	6,000	
177	Conference room table, 14'	2	EA	2,800.00	5,600	
178	Conference room table, 16'	2	EA	3,300.00	6,600	
179	Office desk systems	163	EA	1,000.00	163,000	
180	Conference room chairs	102	EA	400.00	40,800	
181	Office chairs	305	EA	280.00	85,400	
182	Lobby chairs	12	EA	250.00	3,000	
183	Lobby armchairs	3	EA	800.00	2,400	
184	Lobby couch	1	EA	800.00	800	
185	Workstations, 9"x8"	38	EA	6,000.00	228,000	bulk order
186	Workstation chairs	38	EA	250.00	9,500	
187	Allow for miscellaneous furnishings	48,126	SF	5.00	240,630	allowance
188						
189	<u>Equipment</u>					
190	Refrigerator	2	EA	2,000.00	4,000	
191	Allow for projector screens	8	EA	1,500.00	12,000	
192	Allow for installing OSCI equipment	48,126	SF	0.20	9,625	allowance
193	Allow for miscellaneous CSCI equipment	48,126	SF	0.50	24,063	allowance
194						
195	FUNCTION EQUIPMENT & SPECIALTIES				1,475,596	\$30.66 / SF

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
196						
197	<u>Stair Construction</u>					subtotal \$42,000, \$1 / sf
198	Lobby stairs and landings	1	FLT	25,000.00	25,000	
199	Glass balustrading at lobby stair	25	LF	500.00	12,500	
200	SS handrail at lobby stair	25	LF	180.00	4,500	
201						
202	<u>Elevators + Lifts</u>					
203	Elevator, 2 stop	1	EA	90,000.00	90,000	3,500lb hydraulic
204	Allow for cab fit-out	1	EA	10,000.00	10,000	allowance
205						
206	<u>Escalators + Moving Walkways</u>					
207						
208	<u>Other Conveying Systems</u>					
209						
210						
211	STAIRS & VERTICAL TRANSPORTATION				142,000	\$2.95 / SF
212						
213	<u>Sanitary fixtures</u>					subtotal \$63,500, \$1 / sf
214	Fixtures, including local connection pipework	26	FX			
215	Waterclosets, dual flush	10	EA	2,200.00	22,000	
216	Urinals, waterless	2	EA	1,200.00	2,400	
217	Lavatories	8	EA	1,800.00	14,400	
218	Pantry sink	2	EA	1,200.00	2,400	
219	Showers	4	EA	4,000.00	16,000	
220	Sensors	18	EA	350.00	6,300	
221						
222	<u>Sanitary and domestic water</u>					
223	Rough-in for fixtures, including sanitary waste, vent, domestic hot/cold water, insulation	26	EA	5,000.00	130,000	
224	Water metering				Existing	
225	Reduce pressure backflow preventers - 2"				Existing	
226						
227	<u>Water treatment and circulation</u>					
228	Gas-fired water heater	1	EA	6,000.00	6,000	
229	Expansion tank	1	EA	600.00	600	
230	Circulation pump	1	EA	800.00	800	
231						
232	<u>Gas distribution</u>	1	LS	10,000.00	10,000	
233						
234	<u>Roof water drainage</u>	48,126	SF	3.00	144,378	
235						
236	Reclaim water system and irrigation	1	LS	25,000.00	25,000	
237						
238	<u>Other Plumbing Systems</u>					
239	LEED Commissioning assistance	1	LS	7,605.56	7,606	2%
240	Miscellaneous plumbing	1	LS	11,408.34	11,408	Testing, Sterilization, flushing
241	Firestopping/core drilling	1	LS	3,802.78	3,803	
242	Project requirements (coordination, shop dwg, detailing, project management, material handling, security badging)	1	LS	26,619.46	26,619	
243						
244						
245	PLUMBING SYSTEMS				429,714	\$8.93 / SF
246						
247	<u>Heating/Cooling Generating Systems</u>					-
248	Gas fired boilers				Reuse	
249	Cooling tower				Reuse	
250	Water cooled chillers				Reuse	
251	Non-chemical water treatment and seperator				Reuse	
252						
253	<u>Circulation pumps</u>					-
254	Air seperators				Reuse	
255	Expansion tanks				Reuse	
256	Heated hot water pumps				Reuse	
257	Chilled water pumps				Reuse	
258	Variable frequency drives				Reuse	
259	Vibration isolation				Reuse	

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
260						
261	<u>Distribution Systems</u>					subtotal \$218,200, \$5 / sf
262	Heated hot water piping	2,000	LF	50.00	100,000	
263	Valves and specialties					
264	AHU	4	EA	3,000.00	12,000	
265	Reheat coils	45	EA	600.00	27,000	
266	Insulation	2,000	LF	12.00	24,000	
267						
268	Chilled water piping	600	LF	60.00	36,000	
269	Valves and specialties					
270	AHU	4	EA	3,000.00	12,000	
271	Insulation	600	LF	12.00	7,200	
272						
273	<u>Terminal + Packaged Units</u>					subtotal \$646,000, \$13 / sf
274	Air handling unit, 19,000 cfm including sf,rf,cc, hc and filters	4	EA	161,500.00	646,000	
275						
276	<u>Air distribution and return</u>					subtotal \$780,649, \$16 / sf
277	Galvanized sheet metal ductwork,	52,939	LBS	11.50	608,799	
278	Flexible ductwork	1,150	LF	11.00	12,650	
279	Volume dampers	230	EA	60.00	13,800	
280	Combination fire/smoke dampers	4	EA	2,500.00	10,000	
281	Duct insulation	40,722	SF	2.80	114,022	
282	Acoustical lining	6,108	SF	3.50	21,378	
283						
284	<u>Diffusers, registers and grilles</u>					subtotal \$195,500, \$4 / sf
285	Thermafuser 2'x2'	230	EA	850.00	195,500	
286						
287	<u>Control + Instrumentation</u>					subtotal \$228,750, \$5 / sf
288	Direct digital controls systems					
289	Air handling unit	100	PTS	1,500.00	150,000	
290	Thermostats	45	EA	1,500.00	67,500	
291	CO2 sensors	15	EA	750.00	11,250	
292						
293	<u>Systems Testing + Balancing</u>					subtotal \$54,270, \$1 / sf
294	Air handling unit	24	HR	135.00	3,240	
295	Thermafusers	230	HR	135.00	31,050	
296	Dryside	116	HR	135.00	15,660	
297	Wetside	32	HR	135.00	4,320	
298						
299	<u>Exhaust system</u>					
300	Galvanized sheet metal ductwork,					Reuse
301	Toilet exhaust fans					Reuse
302						
303	<u>Other HVAC Systems</u>					subtotal \$254,805, \$5 / sf
304	LEED Commissioning assistance (Fundamental/Enhanced)	1	LS	63,701.07	63,701	3%
305	Seismic, vibration, acoustical	1	LS	21,233.69	21,234	1%
306	Firestopping/core drilling	1	LS	21,233.69	21,234	1%
307	Project requirements (coordination, shop dwg, detailing, project management, material handling, security badging)	1	LS	148,635.83	148,636	7%
308						
309						
310	HEATING, VENTILATING & AIR CONDITIONING				2,378,174	\$49.42 / SF
311						
312	<u>Electrical Service + Distribution</u>					subtotal \$204,688, \$4 / sf
313	Replace existing main switchboard with new	1	EA	30,000.00	30,000	
314	480/277V panels, breakers, feeders	4	EA	8,500.00	34,000	
315	Transformers, feeders, K-4	1	EA	15,000.00	15,000	
316	208/120V distribution panels	1	EA	30,000.00	30,000	
317	208/120V panels, breakers, feeders	6	EA	8,500.00	51,000	
318	Grounding, revise as required	48,126	SF	0.20	9,625	
319	Connect chilled water pumps	2	EA	1,750.00	3,500	
320	Connect elevators	1	EA	7,500.00	7,500	
321	Misc connections to mechanical equipment	48,126	SF	0.50	24,063	
322	Emergency generator					excluded - N/A
323	Central UPS					excluded - N/A

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
324						
325	<u>Lighting + Branch Wiring</u>					subtotal \$650,482, \$14 / sf
326	Supply, install light fixtures	800	EA	475.00	380,000	
327	Exit lights	40	EA	250.00	10,000	
328	Premium for lobby lighting	1	LS	15,000.00	15,000	
329	Battery packs, integral to fixtures	200	EA	130.00	26,000	
330	Lighting back boxes	680	EA	26.00	17,680	
331	Lighting conduit, wire	11,000	LF	7.92	87,120	
332	Occupancy sensors	250	EA	321.00	80,250	
333	Conference room dimming	6	EA	2,000.00	12,000	
334	Low voltage relay panels	2	EA	5,200.00	10,400	
335	Misc. lighting controls	48,126	SF	0.25	12,032	
336						
337	<u>User Convenience Power</u>					subtotal \$182,816, \$4 / sf
338	Convenience outlets, conduit, wire	540	EA	205.00	110,700	
339	Connections to modular furniture	26	EA	650.00	16,900	
340	Gfi receptacles	12	EA	220.00	2,640	
341	WP gfi outlets	4	EA	400.00	1,600	
342	Floor outlets	6	EA	475.00	2,850	
343	Misc. equipment connections	48,126	SF	1.00	48,126	
344						
345	<u>Communications + Security</u>					subtotal \$274,000, \$6 / sf
346	<u>Telephone/data</u>					
347	Outlet boxes, conduit to accessible ceiling	250	EA	100.00	25,000	
348	Jacks, allow 3/drop avg.	750	EA	17.00	12,750	
349	Horizontal cable	112,500	LF	1.25	140,625	
350	Cable tagging, testing	1	LS	11,000.00	11,000	
351	Racks, patch panels, terminations etc.	1	LS	27,000.00	27,000	
352	Riser/backbone conduits, cables	1	LS	20,000.00	20,000	
353	Cable tray	800	LF	35.00	28,000	
354	Misc. infrastructure, J-hooks etc.	48,126	SF	0.20	9,625	
355						
356	<u>Fire Alarm</u>					
357	Devices, control panels, etc.	48,126	SF	4.00	192,504	
358						
359	<u>CATV</u>					
360	Outlets with cable	12	EA	380.00	4,560	
361	Head end	1	LS	5,000.00	5,000	
362						
363	<u>Security</u>					
364	Conduit, boxes	48,126	SF	0.50	24,063	
365	Devices, control panels, cabling	48,126	SF	1.50	72,189	
366						
367	<u>Audio/Visual</u>					
368	Conduit, boxes, cabling	48,126	SF	1.00	48,126	
369						
370	<u>Misc.</u>					subtotal \$157,500, \$3 / sf
371	Seismic bracing	1	LS	40,000.00	40,000	
372	Testing, commissioning	1	LS	40,000.00	40,000	
373	Fire stop	1	LS	7,500.00	7,500	
374	Coordination, documentation	1	LS	40,000.00	40,000	
375	Start-up	1	LS	15,000.00	15,000	
376	Trade demolition	1	LS	15,000.00	15,000	
377						
378	<u>CCTV</u>					excluded - N/A
379						
380	<u>Clocks</u>					excluded - N/A
381						
382	<u>Paging</u>					excluded - N/A
383						
384						
385	ELEC. LIGHTING, POWER & COMMUNICATIONS				1,815,928	\$37.73 / SF
386						
387	<u>Sprinklers</u>					
388	Automatic wet sprinkler system	48,126	SF	6.50	312,819	
389						
390						
391	FIRE PROTECTION SYSTEMS				312,819	\$6.5 / SF

ESTIMATE DETAIL

GSF : 48,126

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
392						
393	<u>Building Elements Demolition</u>					
394	Demolish and remove (E) interior construction	48,126	SF	7.00	336,882	
395	Demolish and remove (E) roof	24,704	SF	3.00	74,112	
396						
397	<u>Hazardous Components Abatement</u>					
398	Allow for hazardous abatement of (E) space	48,126	SF	5.00	240,630	
399						
400	<u>Site Clearing</u>					
401	Allow for clearing (E) site	1	LS	1,000.00	1,000	
402	Allow for site survey	1	LS	5,000.00	5,000	
403						
404	<u>Site Demolition + Relocations</u>					
405	Allow for site demolition	1	LS	2,000.00	2,000	
406						
407	<u>Site Earthwork</u>					
408	N/A					
409						
410						
411	SITE PREPARATION & DEMOLITION				659,624	\$13.71 / SF
412						
413	<u>Parking Lots</u>					
414	Allow for restriping and resigning (E) parking stalls	1	LS	1,500.00	1,500	allowance
415						
416	<u>Pedestrian Paving</u>					subtotal \$50,000, \$1 / sf
417	Allow for new paving	1	LS	50,000.00	50,000	allowance
418						
419	<u>Site Development</u>					subtotal \$26,200, \$1 / sf
420	Allow for new site development	1	LS	20,000.00	20,000	allowance
421	Allow for site furniture	1	LS	20,000.00	20,000	allowance
422	Bike racks	1	EA	1,200.00	1,200	
423	Allow for miscellaneous site features, fixtures	1	LS	5,000.00	5,000	allowance
424						
425	<u>Landscaping</u>					subtotal \$56,000, \$1 / sf
426	Allow for new trees	10	EA	600.00	6,000	
427	Allow for landscaping, irrigation	1	LS	50,000.00	50,000	
428						
429						
430	SITE PAVING, STRUCTURES & LANDSCAPING				153,700	\$3.19 / SF
431						
432	<u>Water Supply</u>					
433	Connection to existing	1	LS	5,000.00	5,000	allowance
434						
435	<u>Sanitary Sewer</u>					
436	Connection to existing	1	LS	10,000.00	10,000	allowance
437						
438	<u>Storm Sewer</u>					
439	Connection to existing	1	LS	5,000.00	5,000	allowance
440						
441	<u>Heating Distribution</u>					
442	Connection to existing	1	LS	5,000.00	5,000	allowance
443						
444	<u>Cooling Distribution</u>					
445	Connection to existing	1	LS	5,000.00	5,000	allowance
446						
447	<u>Electrical Site Utilities</u>					
448	Replace existing incoming service duct bank, assume with 800A. Allow 300ft	300	LF	200.00	60,000	allowance
449						
450	<u>Site Lighting</u>					
451	Not included, assume existing is adequate					excluded
452						
453	<u>Site Communications + Security</u>					
454						
455	Not included, assume existing is adequate					
456						
457						
458	UTILITIES ON SITE				90,000	\$1.87 / SF