



TECHNICAL ASSIGNMENT #2
Cost and Methods Analysis

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Executive Summary

This technical assignment demonstrates techniques used for managing the construction of the Aquarium Hilton Garden Inn located in Atlanta, Georgia. These techniques are demonstrated through a detailed project schedule, site layout planning, assemblies estimating, detailed structural estimate, and a general conditions estimate.

The first item in this technical assignment is the detailed project schedule. The schedule shows the start of construction on 6/13/2006 and project completion occurring on 12/28/2007. There are many key project dates listed as checkpoints along the construction process to help keep the project on track. The site plan shows the building envelope phase of construction. The tower cranes will be in place during this phase as well as mast climbers for closing in the exterior of the building. The envelope of the building involves many different elements including EIFS, stone, plaster, and aluminum panels. This makes for an interesting assemblies estimate to see how these different elements make up the cost of the building envelope system. The cost for the hotel structure composed of concrete can be seen in the detailed structural estimate. The last item in this technical assignment is the general conditions estimate for the 18 month construction schedule.



Detailed Project Schedule

Please see Appendix A for Detailed Project Schedule:

Key Project Dates Summary

Establish GMP Price Proposal	5/8/2006
Issue Foundation Permit Documents	5/12/2006
Owners NTP Issued - Mobilize Construction	6/12/2006
Start Construction – Hotel	6/13/2006
Issue Structural/Building Permit Documents	7/7/2006
Receive Building Permit	7/7/2006
Issue 100% Contract Documents	8/18/2006
Start Construction – Retail	1/8/2007
Hotel Topped-Out	5/7/2007
Hotel TCO	11/9/2007
Hotel Substantial Completion	11/9/2007
Hotel Ops Occup./Preopening & Training	11/12/2007
Hotel Opening/Project Complete	12/28/2007

Site Work

The site work for this project is broken into three different areas due to elevations changes. Area A is at an elevation of 1000.5 ft, Area B at 1010.5 ft. and Area C at 1020.5 ft. This is due to the way the building and parking garage will interact with the site. There will be two tower cranes on site. The south tower crane will be placed in area A near the end of site work in that area on 9/4/2006. The west tower crane will be placed in area C on 9/20/2006.

Partitions and Finish Schedule

The hotel will start having partitions and finishes done before it is completely topped out. This requires a temporary roof to be built over floors 1-7 in order to keep the area safe from the outdoor elements. This allows partitions and finishes to begin on floors 1-7 while the rest of the structure is being closed in.

The schedule for the partitions of guest rooms, BOH, and public area partitions all follow a similar schedule. It can be seen in the schedule that floors 3, 4 and 5 allow 10 days for each phase of partitioning with 5 day overlap with the previous phase. Floors 6 & 7, 8, 9, 10, 11, 12, and 13 all follow this same schedule. All partitions and finishes in the schedule that do not have the phases broken out follow the common phasing of the partition or finish schedule of the area preceding it. For example the restaurant finishes have the identical time constraints as the meeting rooms finishes.

Please view the Detailed Project Schedule in Appendix A:



Site Layout Plan

Please see Appendix B for the Site Layout Plan

The site layout plan is for the building envelope phase of the building construction. This is an interesting phase because all the work is on the exterior of the building in this very congested site. It can be seen that the two tower cranes are still in place during this phase of construction as well as a mast climbing system. Access to the site remains on the Thurmond Street side of the building. There are two small storage areas outside the building but not much storage is needed during this phase of construction. The offices for the jobsite staff are located across the street offsite due to the congestion of the site. All contractors are responsible for finding and paying for offsite parking for their employees.

Please view the Site Layout Plan in Appendix A.



Assemblies Estimate

Please see details of the Assemblies Estimate in Appendix C

The Aquarium Hilton Garden Inn has a building envelope system that involves many different elements. EIFS, Stone, Aluminum Panels, and Plaster area all used in the building envelope system. This makes for an interesting comparison in the different costs for the system. R.S. Means 2006 was used to get a total cost for the \$1,344,920. This does not include any cost for scaffolding and hoisting.

Building Envelope System			
Type	Quantity (SF)	\$/SF	Amount
EFS	42527	\$15.85	\$674,052.95
Aluminum Panel	4795	\$6.21	\$29,776.95
Stone	2004	\$44.50	\$89,178.00
Plaster	920	\$48.00	\$44,160.00
Curtain Wall	7380	\$37.55	\$277,119.00
Storefront	7930	\$17.35	\$137,585.50
Windows	8100	\$28.60	\$231,660.00
Plywood	5958	\$3.50	\$20,853.00
Total:			\$1,504,385.40
Location Factor			0.894
Grand Total			\$1,344,920.55

Please view details of the Assemblies Estimate in Appendix C.



Detailed Structural Estimate

Please see Appendix D for common floor concrete structure takeoff breakdown.

The Aquarium Hilton Garden Inn has a concrete structure consisting of foundation, columns, beam, and post tensioned elevated slabs. A takeoff was done and then the estimate was made using R.S. Means. It was assumed that all concrete was 5000psi early strength concrete. The total cost for the structural system in the Aquarium Hilton is approximately \$4,526,000.

Description	Material/Labor	Quantity	Unit	Unit Price	Cost
Foundation Concrete	M	1430	CY	\$99.00	\$141,570
Foundation Concrete	L	1430	CY	\$36.00	\$51,480
Structural Concrete	M	5400	CY	\$99.00	\$534,600
Elevated Slabs	M	9500	CY	\$99.00	\$940,500
Elevated Slabs	L	9500	CY	\$5.00	\$47,500
Shear Walls Concrete	M	1000	CY	\$99.00	\$99,000
Shear Walls Concrete	L	1000	CY	\$19.80	\$19,800
Columns	M	655	CY	\$99.00	\$64,845
Columns	L	655	CY	\$26.00	\$17,030
Reinforcement Steel	M	530	Tons	\$850.00	\$450,500
Reinforcement Steel	L	530	Tons	\$550.00	\$291,500
Wire Mesh	M	26000	SF	\$0.25	\$6,500
Wire Mesh	L	26000	SF	\$0.19	\$4,940
Formwork	M	190000	SF	\$3.84	\$729,600
Formwork	L	190000	SF	\$4.44	\$843,600
Post Tensioning	M	270000	LBS	\$0.50	\$135,000
Post Tensioning	L	270000	LBS	\$1.14	\$307,800
Finish Concrete	M	226000	SF	\$0.65	\$146,900
Equipment Cost	M				\$230,000
Total:					\$5,062,665
Location Factor					0.894
Total:					\$4,526,023

Please view Appendix D for common floor concrete structure takeoff breakdown.



General Conditions Estimate

Please see further General Conditions Breakdown in Appendix E.

The general conditions estimate summary shows the charges the contractor has for general conditions. A further breakdown can be found in Appendix E. It can be seen that many items in the construction requirements that could be considered general conditions are bought into the subcontractors contracts. The total general conditions cost is \$3,222,298. This is about 7% of the total construction cost.

General Conditions Summary		
Bonds/Insurance/Permits		\$310,580
Staffing		\$1,264,570
Office Support		\$65,435
Safety		\$1,700
Temporary Utilities		\$7,200
Other		\$1,572,813
Total:		\$3,222,298

Please view Appendix E for the General Conditions Breakdown.

John Dixon
Dr. John Messner
10/30/2006



Aquarium Hilton Garden Inn
Atlanta, Georgia
Technical Assignment #2

Appendix A

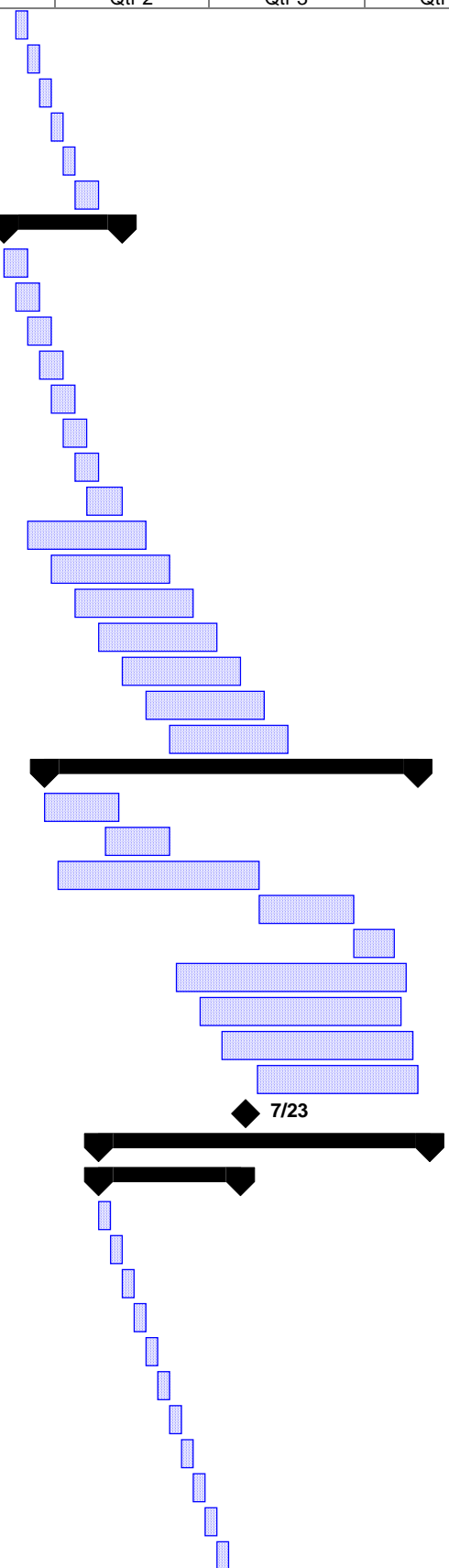
Detailed Project Schedule

ID	Task Name	Duration	Start	Finish	2006				2007				2008		
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
1	Permitting	185 days	Fri 12/30/05	Thu 9/14/06											
2	Design/Preconstruction	142 days	Thu 2/2/06	Fri 8/18/06											
3	Notice to Proceed	0 days	Mon 6/12/06	Mon 6/12/06											
4	Sitework Area A-Basement Level 1000.5	71 days	Tue 6/13/06	Tue 9/19/06											
5	Demolition of Existing Structure	45 days	Tue 6/13/06	Mon 8/14/06											
6	Sitework Cut/Fill to Subgrade @ 1000.5	10 days	Wed 7/26/06	Tue 8/8/06											
7	Install Caissons/Foundations/Walls/Columns @ 1000.5 North End	15 days	Tue 8/1/06	Mon 8/21/06											
8	Backfill to subgrade @ 1000.5 North End	5 days	Tue 8/22/06	Mon 8/28/06											
9	Install Caissons/Foundations/Walls/Columns @ 1000.5 South End	21 days	Tue 8/22/06	Tue 9/19/06											
10	Backfill to Subgrade @ 1000.5 South End	5 days	Tue 9/12/06	Mon 9/18/06											
11	Sitewok Area B - Level 1010.5	40 days	Wed 7/26/06	Tue 9/19/06											
12	Sitework Cut/Fill to Subgrade @ 1010.5	5 days	Wed 7/26/06	Tue 8/1/06											
13	Install Caissons/Foundations/Walls/Columns @ 1010.5	30 days	Wed 8/2/06	Tue 9/12/06											
14	Backfill to subgrade @ 1010.5	5 days	Wed 9/13/06	Tue 9/19/06											
15	Sitework Area C - Loading Dock Level @ 1020.5	32 days	Mon 8/14/06	Tue 9/26/06											
16	Backfill to Subgrade at East Retaining Wall	5 days	Tue 8/22/06	Mon 8/28/06											
17	Sitework cut/fill to subgrade @ 1020.5	10 days	Mon 8/14/06	Fri 8/25/06											
18	Install Caissons/Foundations/Walls/Columns @ 1020.5	20 days	Wed 8/30/06	Tue 9/26/06											
19	Elevated Slabs	169 days	Wed 9/13/06	Mon 5/7/07											
20	Floor 1	9 days	Wed 9/13/06	Mon 9/25/06											
21	Floor 2	17 days	Thu 9/21/06	Fri 10/13/06											
22	Floor 3	13 days	Wed 10/11/06	Fri 10/27/06											
23	Floor 4	24 days	Wed 10/25/06	Mon 11/27/06											
24	Floor 5	13 days	Thu 11/23/06	Mon 12/11/06											
25	Floor 6	17 days	Thu 12/7/06	Fri 12/29/06											
26	Floor 7	19 days	Thu 12/28/06	Tue 1/23/07											
27	Floor 8	13 days	Fri 1/19/07	Tue 2/6/07											
28	Floor 9	14 days	Mon 2/5/07	Thu 2/22/07											
29	Floor 10	15 days	Tue 2/20/07	Mon 3/12/07											
30	Floor 11	16 days	Thu 3/8/07	Thu 3/29/07											
31	Floor 12	9 days	Tue 3/27/07	Fri 4/6/07											
32	Floor 13	15 days	Wed 4/4/07	Tue 4/24/07											
33	Roof Slab	12 days	Fri 4/20/07	Mon 5/7/07											
34	Slab on Grade	25 days	Tue 12/12/06	Mon 1/15/07											
35	Exterior Skin	174 days	Mon 1/1/07	Thu 8/30/07											
36	Exterior Framing Level 1-7	50 days	Mon 1/1/07	Fri 3/9/07											
37	Erect Mast Climbers/Curtain Wall/Ext Sheathing/EFIS Lvl 1-7	59 days	Fri 3/30/07	Wed 6/20/07											
38	Exterior Framing Level 8-13	50 days	Wed 4/25/07	Tue 7/3/07											
39	Exterior Framing Roof Parapet/Skybar	10 days	Wed 7/18/07	Tue 7/31/07											
40	Curtain Wall/Ext Sheathing/EFIS/Punch Windows Level 8-Roof	42 days	Wed 7/4/07	Thu 8/30/07											
41	MEP Rough Ins	90 days	Wed 1/24/07	Tue 5/29/07											
42	Masonry Walls Basement-Roof Levels	80 days	Wed 1/24/07	Tue 5/15/07											
43	Guest Partitions	125 days	Fri 2/23/07	Thu 8/16/07											
44	Level 2	45 days	Fri 2/23/07	Thu 4/26/07											
45	Ductwork / Layout	5 days	Fri 2/23/07	Thu 3/1/07											
46	Metal Studs	5 days	Fri 3/2/07	Thu 3/8/07											

Project: Aquarium Hilton Garden Inn
Date: Mon 10/30/06

Task: Progress Summary External Tasks Deadline Split: Milestone Project Summary External Milestone

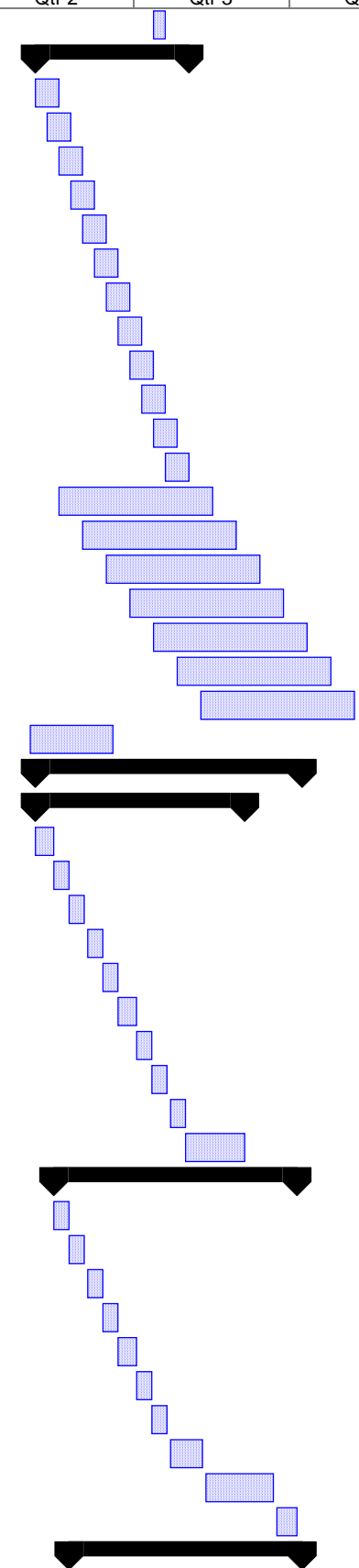
ID	Task Name	Duration	Start	Finish	2006				2007				2008		
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
47	MEP Wall Rough In	5 days	Fri 3/9/07	Thu 3/15/07											
48	Drywall	5 days	Fri 3/16/07	Thu 3/22/07											
49	Ceiling Framing	5 days	Fri 3/23/07	Thu 3/29/07											
50	Ceiling Rough In	5 days	Fri 3/30/07	Thu 4/5/07											
51	Ceiling Drywall	5 days	Fri 4/6/07	Thu 4/12/07											
52	Tape and Finish	10 days	Fri 4/13/07	Thu 4/26/07											
53	Level 3, 4 & 5	50 days	Fri 3/2/07	Thu 5/10/07											
54	Ductwork / Layout	10 days	Fri 3/2/07	Thu 3/15/07											
55	Metal Studs	10 days	Fri 3/9/07	Thu 3/22/07											
56	MEP Wall Rough In	10 days	Fri 3/16/07	Thu 3/29/07											
57	Drywall	10 days	Fri 3/23/07	Thu 4/5/07											
58	Ceiling Framing	10 days	Fri 3/30/07	Thu 4/12/07											
59	Ceiling Rough In	10 days	Fri 4/6/07	Thu 4/19/07											
60	Ceiling Drywall	10 days	Fri 4/13/07	Thu 4/26/07											
61	Tape and Finish	15 days	Fri 4/20/07	Thu 5/10/07											
62	Level 6 & 7	50 days	Fri 3/16/07	Thu 5/24/07											
63	Level 8	50 days	Fri 3/30/07	Thu 6/7/07											
64	Level 9	50 days	Fri 4/13/07	Thu 6/21/07											
65	Level 10	50 days	Fri 4/27/07	Thu 7/5/07											
66	Level 11	50 days	Fri 5/11/07	Thu 7/19/07											
67	Level 12	50 days	Fri 5/25/07	Thu 8/2/07											
68	Level 13	50 days	Fri 6/8/07	Thu 8/16/07											
69	Elevators	159 days	Mon 3/26/07	Thu 11/1/07											
70	Dock Elevator #7	32 days	Mon 3/26/07	Tue 5/8/07											
71	Restaurant Elevator #2	28 days	Tue 5/1/07	Thu 6/7/07											
72	Hotel Service Elevator # 3	85 days	Tue 4/3/07	Mon 7/30/07											
73	Temp Use - Hotel Service Elevator #3	40 days	Tue 7/31/07	Mon 9/24/07											
74	Refurbish Service Elevator #3	18 days	Tue 9/25/07	Thu 10/18/07											
75	Hotel Passenger Elevator #4	98 days	Tue 6/12/07	Thu 10/25/07											
76	Hotel Passenger Elevator #5	85 days	Tue 6/26/07	Mon 10/22/07											
77	Hotel Passenger Elevator #6	81 days	Mon 7/9/07	Mon 10/29/07											
78	Sky Bar Elevator #1	69 days	Mon 7/30/07	Thu 11/1/07											
79	Building "Dried In"	0 days	Mon 7/23/07	Mon 7/23/07											
80	Guest Finishes	140 days	Fri 4/27/07	Thu 11/8/07											
81	Level 2	60 days	Fri 4/27/07	Thu 7/19/07											
82	Prime Paint	5 days	Fri 4/27/07	Thu 5/3/07											
83	Tile	5 days	Fri 5/4/07	Thu 5/10/07											
84	Vanities	5 days	Fri 5/11/07	Thu 5/17/07											
85	Paint	5 days	Fri 5/18/07	Thu 5/24/07											
86	Vinyl Wall Covering	5 days	Fri 5/25/07	Thu 5/31/07											
87	Toilet Fixtures	5 days	Fri 6/1/07	Thu 6/7/07											
88	Doors / Accessories	5 days	Fri 6/8/07	Thu 6/14/07											
89	MEP Trim Out	5 days	Fri 6/15/07	Thu 6/21/07											
90	Carpet	5 days	Fri 6/22/07	Thu 6/28/07											
91	Clean / Punch	5 days	Fri 6/29/07	Thu 7/5/07											
92	Owner Punch	5 days	Fri 7/6/07	Thu 7/12/07											



Project: Aquarium Hilton Garden Inn
Date: Mon 10/30/06

Task: Progress: Summary: External Tasks: Deadline: Split: Milestone: Project Summary: External Milestone:

ID	Task Name	Duration	Start	Finish	2006				2007				2008		
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
93	Repunch / Turnover	5 days	Fri 7/13/07	Thu 7/19/07											
94	Level 3,4,5	65 days	Fri 5/4/07	Thu 8/2/07											
95	Prime Paint	10 days	Fri 5/4/07	Thu 5/17/07											
96	Tile	10 days	Fri 5/11/07	Thu 5/24/07											
97	Vanities	10 days	Fri 5/18/07	Thu 5/31/07											
98	Paint	10 days	Fri 5/25/07	Thu 6/7/07											
99	Vinyl Wall Covering	10 days	Fri 6/1/07	Thu 6/14/07											
100	Toilet Fixtures	10 days	Fri 6/8/07	Thu 6/21/07											
101	Doors / Accessories	10 days	Fri 6/15/07	Thu 6/28/07											
102	MEP Trim Out	10 days	Fri 6/22/07	Thu 7/5/07											
103	Carpet	10 days	Fri 6/29/07	Thu 7/12/07											
104	Clean / Punch	10 days	Fri 7/6/07	Thu 7/19/07											
105	Owner Punch	10 days	Fri 7/13/07	Thu 7/26/07											
106	Repunch / Turnover	10 days	Fri 7/20/07	Thu 8/2/07											
107	Level 6 & 7	65 days	Fri 5/18/07	Thu 8/16/07											
108	Level 8	65 days	Fri 6/1/07	Thu 8/30/07											
109	Level 9	65 days	Fri 6/15/07	Thu 9/13/07											
110	Level 10	65 days	Fri 6/29/07	Thu 9/27/07											
111	Level 11	65 days	Fri 7/13/07	Thu 10/11/07											
112	Level 12	65 days	Fri 7/27/07	Thu 10/25/07											
113	Level 13	65 days	Fri 8/10/07	Thu 11/8/07											
114	Structural / Misc. Steel	35 days	Tue 5/1/07	Mon 6/18/07											
115	Back of House Partitions / Finishes	112 days	Fri 5/4/07	Mon 10/8/07											
116	BOH / Laundry	88 days	Fri 5/4/07	Tue 9/4/07											
117	Ductwork / Layout	7 days	Fri 5/4/07	Mon 5/14/07											
118	Metal Studs	7 days	Tue 5/15/07	Wed 5/23/07											
119	MEP Wall Rough In	7 days	Thu 5/24/07	Fri 6/1/07											
120	Drywall	7 days	Mon 6/4/07	Tue 6/12/07											
121	Tape & Finish	7 days	Wed 6/13/07	Thu 6/21/07											
122	Paint	7 days	Fri 6/22/07	Mon 7/2/07											
123	Ceiling	7 days	Tue 7/3/07	Wed 7/11/07											
124	MEP Trim Out	7 days	Thu 7/12/07	Fri 7/20/07											
125	Flooring	7 days	Mon 7/23/07	Tue 7/31/07											
126	Install Laundry Equipment	25 days	Wed 8/1/07	Tue 9/4/07											
127	Kitchen	104 days	Tue 5/15/07	Fri 10/5/07											
128	Ductwork / Layout	7 days	Tue 5/15/07	Wed 5/23/07											
129	Metal Studs	7 days	Thu 5/24/07	Fri 6/1/07											
130	MEP Wall Rough In	7 days	Mon 6/4/07	Tue 6/12/07											
131	Drywall	7 days	Wed 6/13/07	Thu 6/21/07											
132	Tape & Finish	7 days	Fri 6/22/07	Mon 7/2/07											
133	Paint	7 days	Tue 7/3/07	Wed 7/11/07											
134	Ceiling	7 days	Thu 7/12/07	Fri 7/20/07											
135	Flooring	15 days	Mon 7/23/07	Fri 8/10/07											
136	Install Kitchen Equipment	30 days	Mon 8/13/07	Fri 9/21/07											
137	MEP Trim Out	10 days	Mon 9/24/07	Fri 10/5/07											
138	Fitness/ Administration Area	98 days	Thu 5/24/07	Mon 10/8/07											

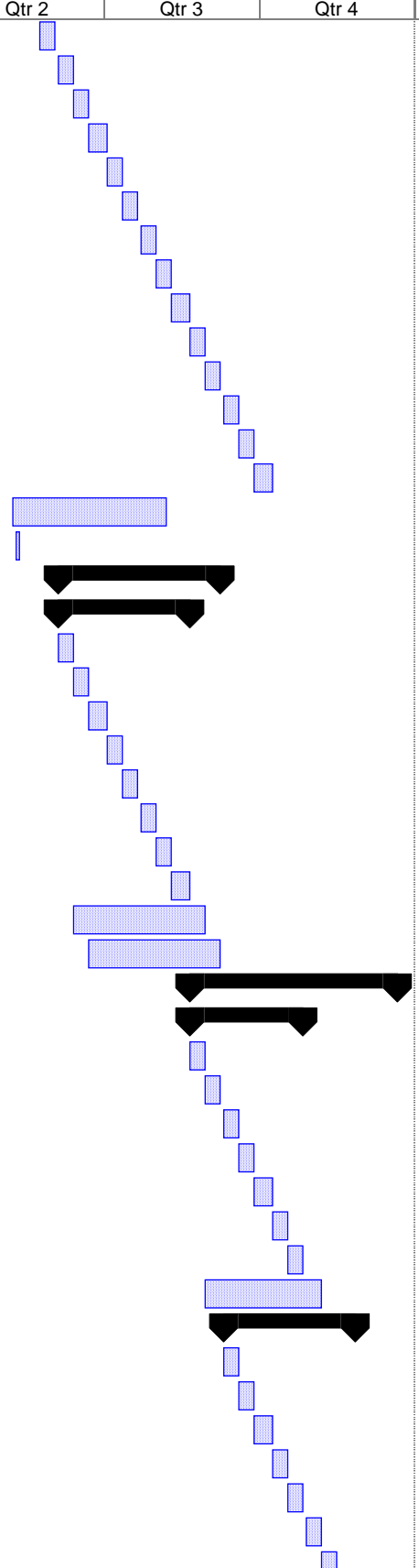


Project: Aquarium Hilton Garden Inn
Date: Mon 10/30/06

Task: Progress Summary External Tasks Deadline

Split: Milestone Project Summary External Milestone

ID	Task Name	Duration	Start	Finish	2006				2007				2008		
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
139	Ductwork / Layout	7 days	Thu 5/24/07	Fri 6/1/07											
140	Metal Studs	7 days	Mon 6/4/07	Tue 6/12/07											
141	MEP Wall Rough In	7 days	Wed 6/13/07	Thu 6/21/07											
142	Drywall	7 days	Fri 6/22/07	Mon 7/2/07											
143	Tape & Finish	7 days	Tue 7/3/07	Wed 7/11/07											
144	Prime Paint	7 days	Thu 7/12/07	Fri 7/20/07											
145	Paint/Tile	7 days	Mon 7/23/07	Tue 7/31/07											
146	Ceiling	7 days	Wed 8/1/07	Thu 8/9/07											
147	Vinyl Wall Covering	7 days	Fri 8/10/07	Mon 8/20/07											
148	Toilet Fixtures	7 days	Tue 8/21/07	Wed 8/29/07											
149	Doors/ Accessories	7 days	Thu 8/30/07	Fri 9/7/07											
150	MEP Trim Out	7 days	Mon 9/10/07	Tue 9/18/07											
151	Carpet	7 days	Wed 9/19/07	Thu 9/27/07											
152	Clean / Punch	7 days	Fri 9/28/07	Mon 10/8/07											
153	Roofing	65 days	Tue 5/8/07	Mon 8/6/07											
154	Temp Roof on Level 7	2 days	Thu 5/10/07	Fri 5/11/07											
155	Public Area Partitions	70 days	Mon 6/4/07	Fri 9/7/07											
156	Meeting Rooms	56 days	Mon 6/4/07	Mon 8/20/07											
157	Ductwork / Layout	7 days	Mon 6/4/07	Tue 6/12/07											
158	Metal Studs	7 days	Wed 6/13/07	Thu 6/21/07											
159	MEP Wall Rough In	7 days	Fri 6/22/07	Mon 7/2/07											
160	Drywall	7 days	Tue 7/3/07	Wed 7/11/07											
161	Ceiling Framing	7 days	Thu 7/12/07	Fri 7/20/07											
162	Ceiling Rough In	7 days	Mon 7/23/07	Tue 7/31/07											
163	Ceiling Drywall	7 days	Wed 8/1/07	Thu 8/9/07											
164	Tape and Finish	7 days	Fri 8/10/07	Mon 8/20/07											
165	Restaurant	56 days	Wed 6/13/07	Wed 8/29/07											
166	Lobby	56 days	Fri 6/22/07	Fri 9/7/07											
167	Public Area Finishes	89 days	Tue 8/21/07	Fri 12/21/07											
168	Meeting Rooms	49 days	Tue 8/21/07	Fri 10/26/07											
169	Millwork Trim	7 days	Tue 8/21/07	Wed 8/29/07											
170	Paint	7 days	Thu 8/30/07	Fri 9/7/07											
171	Vinyl Wall Covering	7 days	Mon 9/10/07	Tue 9/18/07											
172	Doors / Accessories	7 days	Wed 9/19/07	Thu 9/27/07											
173	MEP Trim Out	7 days	Fri 9/28/07	Mon 10/8/07											
174	Carpet	7 days	Tue 10/9/07	Wed 10/17/07											
175	Clean / Punch	7 days	Thu 10/18/07	Fri 10/26/07											
176	Restaurant	49 days	Thu 8/30/07	Tue 11/6/07											
177	Lobby	56 days	Mon 9/10/07	Mon 11/26/07											
178	Millwork Trim	7 days	Mon 9/10/07	Tue 9/18/07											
179	Paint	7 days	Wed 9/19/07	Thu 9/27/07											
180	Vinyl Wall Covering	7 days	Fri 9/28/07	Mon 10/8/07											
181	Doors / Accessories	7 days	Tue 10/9/07	Wed 10/17/07											
182	Cabinetry	7 days	Thu 10/18/07	Fri 10/26/07											
183	MEP Trim Out	7 days	Mon 10/29/07	Tue 11/6/07											
184	Carpet	7 days	Wed 11/7/07	Thu 11/15/07											

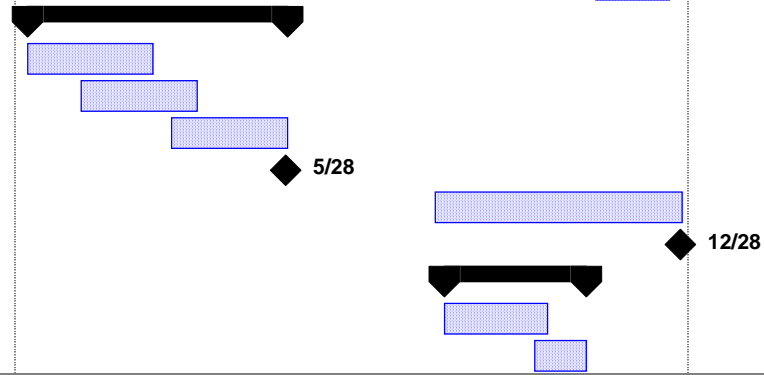


Project: Aquarium Hilton Garden Inn
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Task: Progress Summary External Tasks Deadline

Split: Milestone Project Summary External Milestone

ID	Task Name	Duration	Start	Finish	2006				2007				2008	
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
185	Clean / Punch	7 days	Fri 11/16/07	Mon 11/26/07										
186	TCO	10 days	Mon 10/29/07	Fri 11/9/07										
187	Substantial Completion	0 days	Fri 11/9/07	Fri 11/9/07										
188	Final Punch, Clean, & Closeout	30 days	Mon 11/12/07	Fri 12/21/07										
189	Retail	101 days	Mon 1/8/07	Mon 5/28/07										
190	MEP Rough Ins	50 days	Mon 1/8/07	Fri 3/16/07										
191	Glass & Glazing	45 days	Tue 2/6/07	Mon 4/9/07										
192	Partitions	45 days	Tue 3/27/07	Mon 5/28/07										
193	First Tenant Occup. For TI Building	0 days	Mon 5/28/07	Mon 5/28/07										
194	Owner Equipment / FFE	96 days	Fri 8/17/07	Fri 12/28/07										
195	Hotel Opening / Project Complete	0 days	Fri 12/28/07	Fri 12/28/07										
196	Hardscape / Landscape	55 days	Wed 8/22/07	Tue 11/6/07										
197	Hardscape	40 days	Wed 8/22/07	Tue 10/16/07										
198	Landscape	20 days	Wed 10/10/07	Tue 11/6/07										



Project: Aquarium Hilton Garden Inn
Date: Mon 10/30/06

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone

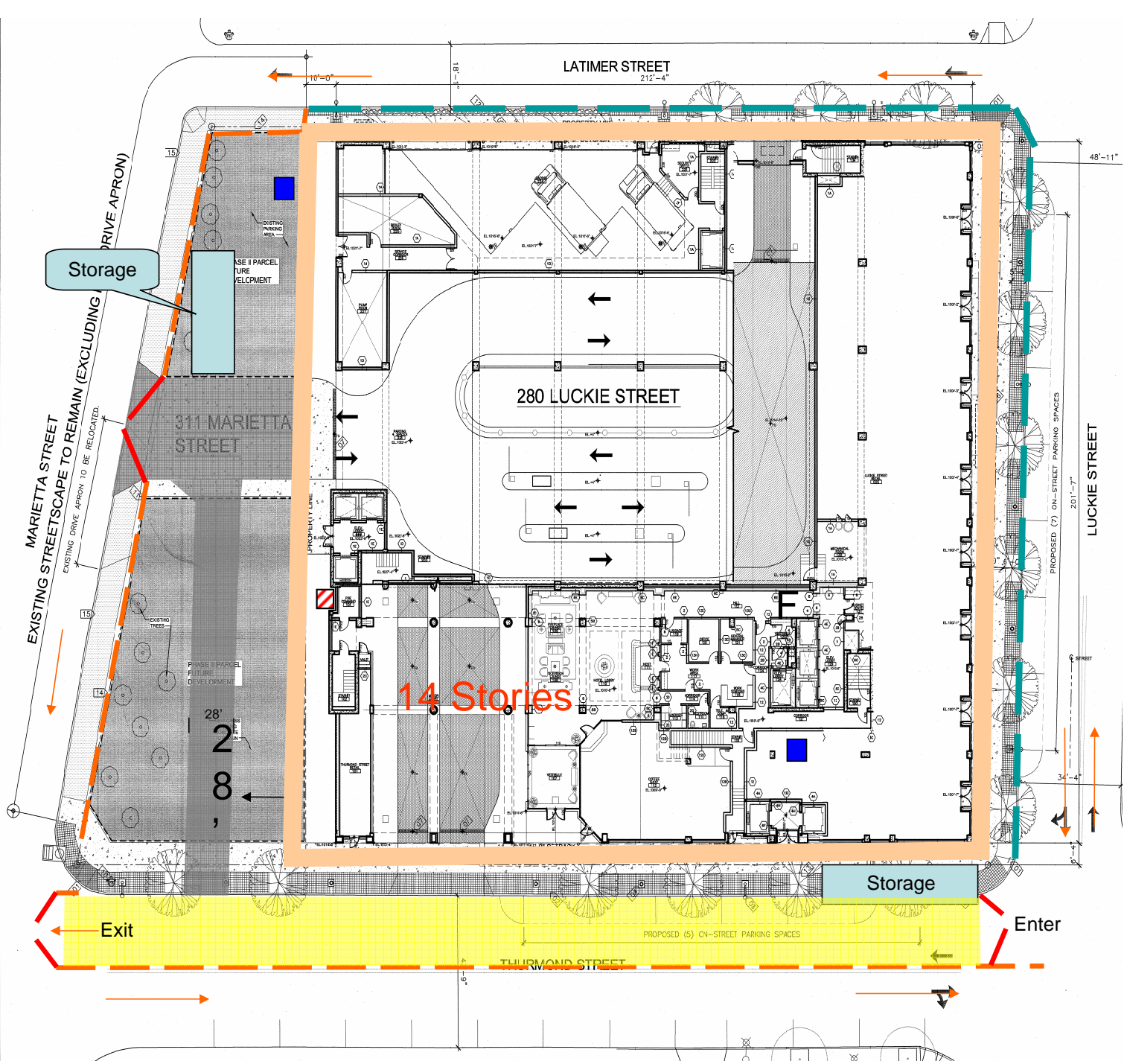
John Dixon
Dr. John Messner
10/30/2006



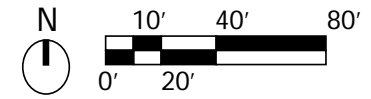
Aquarium Hilton Garden Inn
Atlanta, Georgia
Technical Assignment #2

Appendix B

Site Layout Plan



- Legend:**
-  Access Road
 -  Cranes
 -  Buck hoist
 -  Lane Closer
 -  Netting Fence
 -  Slate Fence
 -  Gate
 -  Mast Climbers



Aquarium Hilton Garden Inn

Site Layout Plan – Building Envelope Phase

John Dixon
Dr. John Messner
10/30/2006



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Atlanta, Georgia
Technical Assignment #2

Appendix C

Assemblies Estimate



Building Envelope Breakdown		
	Type	Quantity (SF)
East		
	EFS	11915
	Aluminum Panel	2152
South		
	EFS	14464
	Aluminum Panel	2049
	Stone	1612
West		
	EFS	10148
	Aluminum Panel	363
	Stone	192
	Plaster	920
North		
	EFS	6000
	Aluminum Panel	231
	Stone	200

Glass/Glazing System		
	Type	Quantity (SF)
Hotel		
	Curtain Wall	2100
	Storefront	7930
	Windows	8100
Retail		
	Plywood	5958
Sky Bar		
	Curtain Wall	7380

Appendix D

Detailed Structural Estimate
Common Floor Takeoff

Columns	Quantity	Length (FT)	CY
1.5 x 1.5	19	9	14
1.5 x 2	20	9	20
2 x 3	6	9	12
TOTAL:			46

Beams	Length (FT)	Width (IN)	Depth (IN)	Top Bars	Bottom Bars	Stirrups	CY
PPTB1	128	28	32	16#8	12#8	#3	29
PPTB3	256	28	32	10#8	8#8	#3	59
PPTB4	78	28	32	16#8	12#8	#3	18
PPTB5	64	28	32	10#8	8#8	#3	15
PPTB6	78	24	24	11#8	9#8	#3	12
PPTB7	30	24	24	7#8	6#8	#3	4
PPTB8	34	24	24	7#8	6#8	#3	5
PPTB9	64	28	32	16#8	12#8	#3	15
PPTB10	52	28	32	10#8	8#8	#3	12
PPTB40	64	28	32	12#8	10#8	#3	15
PPTB601	24	24	18	9#8	9#8	#3	3
PPTB602	48	24	18	6#8	6#8	#3	5
PPTB603	24	24	18	6#8	6#8	#3	3
TPTB801	30	24	26	9#7, 5#8	12#7	#3	5
TPTB802	28	24	46	9#8	5#8, 4#7	#3	8
TPTB803	28	24	24	8#7	8#7	#3	4
TPTB804	28	24	24	8#7	8#7	#3	4
TPTB805	28	24	24	8#7	8#7	#3	4
TPTB806	28	24	24	8#7	8#7	#3	4
TPTB601	24	24	24	11#8	9#8	#3	4
TPTB602	48	24	24	7#8	6#8	#3	7
TPTB603	24	24	24	7#8	6#8	#3	4
TPTB313	29	12	15.5	4#7	4#7	#3	1
PCB8	14	12	18	4#7	4#7	#3	1
PCB9	20	14	18	6#7	6#7	#3	1
PCB10	22	12	18	4#7	4#7	#3	1
TCB801	44	10	18	4#8	4#8	#3	2
TCB802	28	12	18	4#7	4#7	#3	2
TOTAL:							246

Post Tensioned Slabs		
Depth (In)	Area (SF)	CY
7	28864	624
8	4608	114
9.5	4464	131
TOTAL:		868

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Dr. John Messner
10/30/2006



Aquarium Hilton Garden Inn
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Technical Assignment #2

Appendix E

General Conditions Breakdown



General Conditions					
Description	Labor/ Material	Qty	Units	Unit Price	Amount
As-built Drawings	M	1	LS	\$2,000	\$2,000
Assistant Superintendent P/D	M	66	WK	\$0	\$0
Building Information Modeling Services	M	1	LS	\$40,000	\$40,000
Communications Equipment	M	1	LS	\$2,000	\$2,000
Contractors Fee	P	3.25	%	\$442,859	\$1,439,293
Copier	M	18	MO	\$500	\$9,000
Courier	M	18	MO	\$150	\$2,700
Daily Photos	M	17	MO	\$30	\$510
Fax Machine	M	1	LS	\$500	\$500
Field Office Processor	M	79	WK	\$0	\$0
Field Office Setup	M	120	MH	\$28	\$3,360
Field Office Setup	M	1	LS	\$4,000	\$4,000
Field Office Trailer	M	18	MO	\$750	\$13,500
First Aid	M	17	MO	\$100	\$1,700
Job Signs	M	60	MH	\$28	\$1,680
Job Signs	M	1	LS	\$2,500	\$2,500
Management Substance Abuse Testing	M	17	EA	\$65	\$1,105
Meeting Expense / M&E	M	17	MO	\$250	\$4,250
Monthly Photos	M	17	MO	\$350	\$5,950
Network Connection Fees	M	18	MO	\$200	\$3,600
Office Furniture	M	1	LS	\$1,500	\$1,500
Office Security	M	1	LS	\$2,000	\$2,000
Office Supplies	M	18	MO	\$650	\$11,700
Offsite Parking (5 Spaces)	M	0	MO	\$0	\$0
Operations Manager	M	630	MH	\$0	\$0
PC's / Modems	M	5	MO	\$175	\$875
Postage / Expressage	M	18	MO	\$650	\$11,700
Project Auditor	M	1	EA	\$1,500	\$1,500
Project Engineer #2	M	79	WK	\$0	\$0
Project Engineer P/D	M	33	WK	\$0	\$0
Project Manager	M	79	WK	\$0	\$0
Project Manager Car	M	18	MO	\$950	\$17,100
Salary Accrual Code	M	1	LS	\$1,264,570	\$1,264,570
Secretary	M	65	WK	\$0	\$0
Software	M	125	MO	\$141	\$17,675
Sr. Project Engineer	M	70	WK	\$0	\$0
Superintendent	M	74	WK	\$0	\$0
Superintendent Truck	M	17	MO	\$1,150	\$19,550
Telephone	M	18	MO	\$900	\$16,200
Telephone Set-up	M	1	LS	\$2,500	\$2,500
Temporary Power (Trailer)	M	18	MO	\$300	\$5,400
Temporary Water (Trailer)	M	18	MO	\$100	\$1,800
Travel Expenses	M	0	MO	\$0	\$0
Total					\$2,911,718



Description	Amount
Builders Risk Insurance	\$76,495
Building Permit	\$200,671
Demolition Permit	\$0
Equipment Floater Insurance	\$7,500
General Liability Insurance	\$0
Gross Receipts Taxes	\$914
Licensed Survey	\$5,000
Performance Bond	\$0
Warranty	\$20,000
Total	\$310,580

Construction Requirements				
Description	Labor	Material/ Equipment	Fee	Total
Continuous Cleanup	\$121,380	\$8,500	\$0	\$129,880
Dumpster	\$0	\$93,500	\$0	\$93,500
Final Cleanup	\$0	\$37,113	\$0	\$37,113
First Aid	\$0	\$2,550	\$0	\$2,550
General Safety	\$170,742	\$0	\$0	\$170,742
General Small Tools	\$0	\$3,400	\$0	\$3,400
Ice, Cups, Water	\$0	\$3,740	\$0	\$3,740
Layout Engineering	\$0	\$250,019	\$0	\$250,019
Man Hoist	\$36,530	\$165,350	\$0	\$201,880
Mechanical Startup	\$0	\$50,000	\$0	\$50,000
Misc. Hoisting - Lull	\$0	\$38,500	\$0	\$38,500
Offsite Data Storage	\$0	\$3,000	\$0	\$3,000
Safety Program	\$7,020	\$19,325	\$0	\$26,345
Temp Protection	\$5,000	\$5,500	\$0	\$10,500
Temp Dry-in	\$0	\$12,000	\$0	\$12,000
Temporary Fencing	\$0	\$7,200	\$0	\$7,200
Temporary Power	\$0	\$39,000	\$0	\$39,000
Temporary Toilets	\$5,616	\$12,750	\$0	\$18,366
Temporary Water	\$0	\$5,950	\$0	\$5,950
Tower Cranes	\$296,405	\$525,650	\$0	\$822,055
Waterproofing Consultant	\$0	\$2,000	\$0	\$2,000
Total				\$1,927,740