



American Speech - Language - Hearing Association

AtSite Real Estate

Michael Abbondante Construction Management Dr. Horman American Speech-Language Hearing Association National Headquarters Rockville, MD October 30, 2006 Technical Report 2

## Index:

Executive Summary:	1
Detailed Project Schedule:	.2
Site Layout Planning:	3
Assemblies Estimate:	4
Detailed Structural Estimate	5
General Conditions	6
Appendix A Detailed Project Schedule	8-17
Appendix B Site Layout Planning	8-19
Appendix C Assemblies Estimate	.20-22
Appendix D Detailed Structural Estimate	23-26
Appendix E General Conditions Estimate	

#### **Executive Summary**

This technical assignment provides deeper insight into the American Speech Language – Hearing Association Headquarters located in Rockville, MD. In this assignment the project will be analyzed from a detailed project schedule, a greater in depth site plan, and multiple estimates including an assemblies, detailed structural, and general conditions estimate. All of these items will allow individuals to become more familiar with the project and understand the importance of the execution of each of these assignments and how greatly then can affect the project.

The ASHA is a highly interesting project in that so much relies on the schedule as well as the materials selected and used throughout the project. The ASHA has already sold their old headquarters and are now back renting, therefore, the schedule is crucial. If the project were to go over the allotted schedule the ASHA would not only be losing money on the project itself, but would be forced to continue to pay rent until the building was finally completed. A mistake with the schedule could cost the ASHA a lot of money and cause much aggravation and animosity.

The ASHA is also attempted to reach a LEED rating and therefore in the assemblies estimate the skin of the building is essential in helping with the overall rating of the building. The materials for the façade were chosen not simply for their attractive demeanor, but also because each material will help the ASHA attain the silver LEED rating they are so greatly attempting to reach.

The ASHA is not simply an interesting building architecturally with its unique materials, and design, but also because of all that remains essential for the success of the project. The structural system is quite complicated do to the interesting design, and it intertwines a mix of steel and concrete, while remaining green. The ASHA provides many interesting opportunities all involving the overall importance of the owner and the project itself.

### **Detailed Project Schedule**

The project schedule consists of 199 tasks each of which is nearly essential to the project and its overall success. The schedule is actually broken down into key elements occurring on the construction site. It begins with the notice to proceed and then is followed by the site work that must occur. The other essential tasks follow in their legitimate order beginning with the structure of concrete and steel and finally ending with final testing and punch lists. Please see appendix A for the detailed project schedule.

#### **Site Layout Planning**

The advantage to having the project be found in Rockville, MD is that there is very little or no concern for site congestion. Although the site has little to worry about with congestion of other buildings due to the speed of the project it is essential to have the site laid out properly to conserve the most space throughout the project.

While setting up the site one of the essential aspects was having the sediment pond immediately set up. The pond then had a pipe run to it so that any rain water that could have ruined the site due to the water tables was avoided. It was also decided that two different cranes would be used throughout the project which was essential to the sequencing. The project would begin with a tower crane to help with the C.I.P. and formwork. Once the site work was completed the crane would be disassembled and removed from the site and a mobile crane would then enter the site. The mobile crane simply allows for better mobility and for more lifts to occur in a day. The building is not very high, but it is quite long and oddly shaped. Therefore, a tower crane may have difficulty with some of the lifts while a mobile crane could simply move to the most convenient location and continue with the lift.

Although there are no surrounding buildings, the building footprint, stockpiling, and pond all require a lot of the land. The land on the project is the only available place to store machines, workers need to park, and trailers needed to be placed. Access to the site became an essential concern. Trucks and other equipment needed to easily be able to leave the main road enter the site, drop off or pick up the necessary items and leave again. The main access road then became a simply u at the beginning of the site that could be easily accessed and parking was available just off to the side for both workers and machinery that would allow them all to be off and out of the way of construction.

The trailers and temporary utilities were then placed near the road that way workers and subs could easily access the trailers and they were close enough to the site that it was easy to observe what was occurring on the site. Although the site is large the same rules apply on the importance on conserving space and maintaining easy access are essential to every slight plan. A site layout plan can be observed in appendix B.

#### **Assemblies Estimate**

The skin of the ASHA National Headquarters is so interesting that it has become the focus of this assemblies estimate. All of the values for the estimate were obtained from the Cost Works program. The façade is so interesting because the building looks different from every angle. The façade consists of seven different types of glass, three different types of pre-cast concrete, and a metal paneling system that simply helps aesthetics. The façade facing the road consists primarily of glass mostly a spandrel glass, but each type of glass and pre-cast is actually used on the front of the building, and a bending shape in the glass is also presented. On the eastern an western sides slightly less glass is used however an interesting mix of the pre-cast is three different colors very much like the glass simply to provide even greater contrast in the building. Below is a general summary of the overall costs of the façade, but appendix C will provide a much more detailed explanation.

Façade	Cost
North	827401.72
South	849324.98
East	483020.96
West	652152.8
Total	2952647

### **Detailed Structural Estimate**

A detailed estimate was performed for the structural system. This included, the footings, S.O.G, the concrete structural system on the sub-levels, the steel frame on the upper levels, as well as the remaining slabs with rebar and metal decks. The actual detailed estimate can be viewed in the appendix once again.

After completing the estimate it was highly obvious that while steel is generally more expensive, due to the large amounts of concrete and reinforcing used in the lower levels as well as the concrete structural columns, the concrete actually manages to be slightly more expensive. The structural system for this building is highly interesting since the building is neither completely concrete nor steel. Instead just as the system begins to peak the concrete columns are then replaced with steel columns and beams for the remaining structural system. All estimates again were used from the Cost Works program as well as multiple websites to confirm the overall cost of one ton of steel. The detailed estimate can be viewed in the appendix D.

### **General Conditions Estimate**

The general conditions estimate is being calculated to understand what further costs a GC must take into consideration outside of the job when they are preparing to begin a project. Small items such as paper in the office can run up a heavy bill and it is in these general conditions that these concerns are addressed. Below is a table of the general overview of the calculations however a more precise estimate can again be seen in appendix E. Again all estimates were taken from the Cost Works program.

General Cost	Expense
Staffing	890400
Office Support	18300
Temporary Utilities	2182.8
Bonds & Fees	1209800
General	88079
Total	2208761.8

# Appendix A:



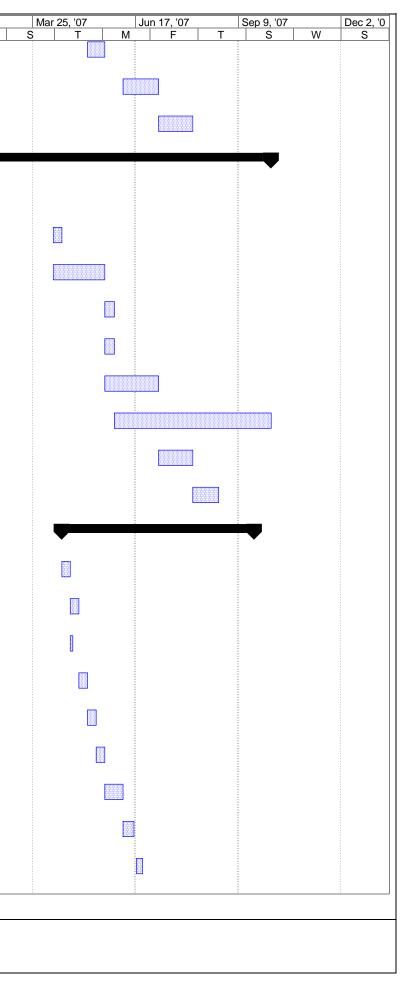
ID Micha	ael Abasinitante nical Assignment 2	Duration	Start	Finish	4, '05 S	Nov 6, '05 T M	Jan 29, '06 F T	Apr 23, '06 S W S	Jul 16, '06 6 T M	Oct 8, '06		Dec 31, '06 S W	Mar 25, '07 S T	Jun 17, '07 M F	Sep 9, '07 T S V	Dec 2, '0 N S
	<sup>7</sup> Building Permit Issued	0 days	Fri 9/8/06	Fri 9/8/06		<u> </u>	<u> </u>					<u> </u>				
2	Temporary Power	117 days?	Fri 4/28/06	Fri 10/6/06												
3	Stakeout Property Corners	10 days?	Tue 5/30/06	Mon 6/12/06												
4	Start Project	0 days	Tue 5/30/06	Tue 5/30/06				5/30	0							
5	Notice to Proceed	0 days	Tue 6/27/06	Tue 6/27/06				•	6/27							
6	SITEWORK	325 days?	Thu 11/3/05	Tue 1/30/07		•										
7	Stakeout LOD	172 days?	Thu 11/3/05	Thu 6/29/06												
8	Civil Permits/Plans	22 days?	Mon 6/5/06	Mon 7/3/06												
9	Precon, Site Prep, Silt Fend	5 days?	Wed 7/5/06	Tue 7/11/06												
10	Tree Clearing & Topsoil Re	1 day?	Wed 7/12/06	Wed 7/12/06												
11	Dig for Sediment Pond #1	8 days?	Wed 7/12/06	Fri 7/21/06												
12	Install 30" RCP pipe from p	4 days?	Mon 7/24/06	Thu 7/27/06												
13	Sequence of 30" storm line	38 days?	Sat 6/24/06	Tue 8/15/06												
14	Rock Blasting @ storm line	4 days?	Fri 7/28/06	Wed 8/2/06												
15	Complete 30" RCP Pipe frc	9 days?	Thu 8/3/06	Tue 8/15/06												
16	Grade Building Pad	28 days?	Wed 8/16/06	Fri 9/22/06												
17	Grade South Side of Site	4 days?	Mon 9/25/06	Thu 9/28/06												
18	Install 15" HD line from Ent	10 days?	Thu 9/28/06	Wed 10/11/06					[							
19	Complete Construction Ent	3 days?	Thu 10/12/06	Mon 10/16/06												
20	Install Sewerline	3 days?	Thu 10/12/06	Mon 10/16/06												
21	Waterline Tie In & Temp. V	10 days?	Mon 10/16/06	Fri 10/27/06												
22	Install South Side Utilities	10 days?	Thu 11/9/06	Wed 11/22/06							1					
23	Install Retaining Walls	15 days?	Mon 12/4/06	Fri 12/22/06												
													:	:		
roject: extend ate: Tue 11/2	led schedule.mpp Task			Progress				· · ·	xternal Tasks		Deadlin	e 🖓				
ate: Tue 11/2	28/06 Split			Milestone	•	Pr	oject Summary	E	xternal Milestone							

ID	Michael	Abasinstante al Assignment 2	Duration	Start	Finish	4, '05	Nov 6, '05		an 29, '06	Apr 23	8, '06	Jul 16, '06	Oct 8, '0		Dec 31, '06	Mar 2		Jun 17, '07		Sep 9, '07		ec 2, '0
	9 of 27	Cut West Road & South Lc	11 days?	Tue 12/26/06	Tue 1/9/07	S	<u>    T       M </u>	<u> </u>	T	S W	S	<u>T M</u>	<u> </u>		<u>S</u> W	<u> </u>	T   N	<u>  F</u>	<u> </u>	S	W	S
25		Install South Parking Lot C	10 days?	Wed 1/10/07	Tue 1/23/07																	
26		Install Parking Lot & West I	5 days?	Wed 1/24/07	Tue 1/30/07																	
27		Complete Site Utilities	11 days?	Wed 6/14/06	Tue 6/27/06																	
28		Waterproof Over Top of Ga	21 days?	Wed 6/28/06	Wed 7/26/06																	
29		Complete Grading of Site	10 days?	Thu 7/20/06	Wed 8/2/06						Eddition											
		Complete Curb & Gutter	15 days?	Thu 8/3/06	Wed 8/23/06																	
			-																			
		Install Sidewalks	11 days?	Thu 8/24/06	Thu 9/7/06																	
32		Concrete Pavers	9 days?	Mon 9/11/06	Thu 9/21/06																	
33		Asphalt	4 days?	Mon 9/25/06	Thu 9/28/06																	
34		Lanscaping/Irrigation	19 days?	Mon 10/2/06	Thu 10/26/06																	
35		Concrete	95 days?	Wed 8/23/06	Tue 1/2/07										V							
36		Layout/Tower Crane Found	3 days?	Wed 8/23/06	Fri 8/25/06							1										
37		Footings K to P	21 days?	Thu 8/24/06	Thu 9/21/06																	
38		Footings F to K	12 days?	Fri 8/25/06	Mon 9/11/06																	
39		Footings C to F	10 days?	Mon 8/28/06	Fri 9/8/06																	
40		Building Permit	8 days?	Wed 8/30/06	Fri 9/8/06																	
41		Erect Tower Crane	2 days?	Wed 8/30/06	Thu 8/31/06																	
42		Walls - 3 to 9	10 days?	Fri 9/8/06	Thu 9/21/06																	
												888888										
43		Footings - P to R	9 days?	Mon 9/11/06	Thu 9/21/06																	
44		Footings - R to V	9 days?	Mon 9/11/06	Thu 9/21/06																	
45		Install Underslab Piping	13 days?	Mon 9/11/06	Wed 9/27/06																	
46		Walls - 3 to 1 on C	8 days?	Tue 9/12/06	Thu 9/21/06																	
														-								
Proiect	extended	schedule.mpp Task			Progress			Summary			Externa	al Tasks		Deadli	ne 🗸	7						
Date: Tu	ie 11/28/0	Split			Milestone	•		Project Su	ummary 🛡		Externa	al Milestone 🔶			Ň							
						•			*			*										

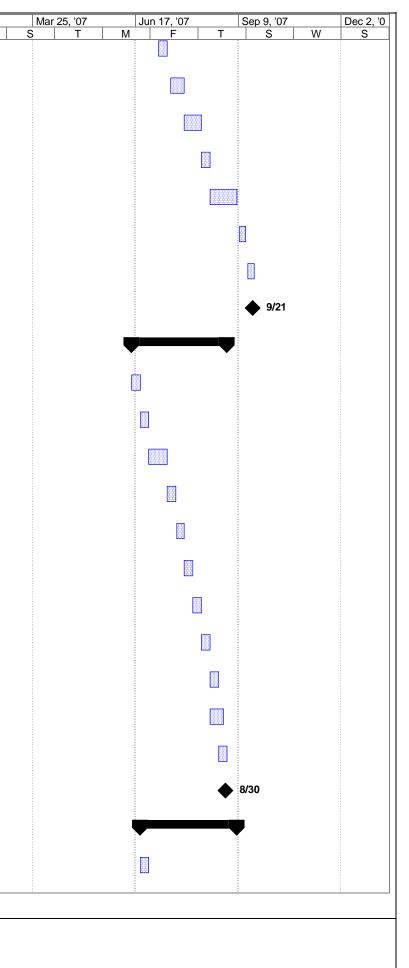
	<b>Te</b> chnical	basinnante Assignment 2	Duration	Start	Finish 4, '05 S	Nov 6, '05	Jan 29, '06	Apr 23, '06	Jul 16, '06 S T N	Oct 8, '06	Dec 31, '06	Mar 25, '07	Jun 17, '07	Sep 9, '07 T S	W S
	10 of 27	Walls - C to G on 1	4 days?	Wed 9/20/06			<u>, , , , , , , , , , , , , , , , , , , </u>							<u>,                                     </u>	<u> </u>
18		Walls - E.1 to J.1 on 9	2 days?	Wed 9/20/06	Thu 9/21/06										
9		Walls - J.1 to M.1 on 9	3 days?	Wed 9/20/06	Fri 9/22/06										
50		Walls - G to L on 1	3 days?	Mon 9/25/06	Wed 9/27/06										
51		Walls - M.1 to P	3 days?	Mon 9/25/06	Wed 9/27/06										
52		Walls - L to P on 1	3 days?	Wed 9/27/06	Fri 9/29/06										
53		SOG - Pour #1 - J to C	3 days?	Thu 9/28/06	Mon 10/2/06										
54		Walls - P to S on .5	3 days?	Fri 9/29/06	Tue 10/3/06										
55		Walls - S to V on .5	3 days?	Tue 10/3/06	Thu 10/5/06										
56		Walls - 6 to 4.2 on V	3 days?	Thu 10/5/06	Mon 10/9/06										
57		Walls - 4.2 to .5 on V	3 days?	Mon 10/9/06	Wed 10/11/06										
58		SOG - Pour #2 - J.9 to M.9	7 days?	Mon 10/9/06	Tue 10/17/06										
59		B1 - Pour #1	11 days?	Wed 10/11/06	Wed 10/25/06										
60		SOG - Pour #3 - P to S	7 days?	Mon 10/16/06	Tue 10/24/06										
61		B1 - Pour #2	8 days?	Thu 10/19/06	Mon 10/30/06										
62		SOG - Pour #4 - S to V	7 days?	Mon 10/23/06	Tue 10/31/06										
63		B1 - Pour #3	9 days?	Wed 10/25/06	Mon 11/6/06										
64		B1 - SOG	7 days?	Tue 10/31/06	Wed 11/8/06										
65		B2 Poured Out	0 days	Tue 10/31/06	Tue 10/31/06					<b>•</b> 10/3	1				
66		B1 - Pour #4	8 days?	Thu 11/2/06	Mon 11/13/06										
67		Plaza - Pour #1	10 days?	Thu 11/9/06	Wed 11/22/06										
68		B1 Poured Out	0 days	Mon 11/13/06	Mon 11/13/06					◆ 1	1/13				
69		Plaza - Pour #2	12 days?	Thu 11/16/06	Fri 12/1/06										
oiect:	extended so	chedule.mpp Task			Progress		Summary		External Tasks		Deadline 🗸	7			

	Technic	Abasin Nante al Assignment 2	Duration	Start	Finish	4, '05 S	Nov 6, '05 T M	F	29, '06 T S	Apr 23, '06 W	S Jui	16, '06 Г M	Oct 8, '	06 T	Dec 31, '06 S W	Mar 25, ' S	<u>07   ј</u> Т   М	in 17, '07 F T	Sep 9, '07	W	Dec 2, '0 S
70	11 of 27	Plaza - Pour #3	10 days?	Mon 11/27/06	Fri 12/8/06		.   171	<u> </u>			<u> </u>	.   171					.   IVI			vv	
71		Plaza - Pour # 4	10 days?	Mon 12/4/06	Fri 12/15/06																
72		Plaza - Pour #5	10 days?	Mon 12/11/06	Fri 12/22/06																
73		Plaza Poured Out	0 days	Fri 12/22/06	Fri 12/22/06										12/22						
74		Backfill Building	6 days?	Tue 12/26/06	Tue 1/2/07																
75		Steel & SOMD	75 days?	Wed 1/3/07	Tue 4/17/07																
76		Steel Second & Th	ird Floor 20 days?	Wed 1/3/07	Tue 1/30/07																
77		Install Deck, Angle	, Studs - 13 days?	Wed 1/31/07	Fri 2/16/07																
78		Steel Fourth & Fifth	Floors 15 days?	Wed 1/31/07	Tue 2/20/07																
79		Install Deck, Angle	, Studs - 13 days?	Wed 2/21/07	Fri 3/9/07																
80		Steel at Roof & Per	20 days?	Wed 2/21/07	Tue 3/20/07																
81		Pour 3rd Deck	2 days?	Wed 2/21/07	Thu 2/22/07																
82		Install Steel Stair #	1 20 days?	Wed 2/21/07	Tue 3/20/07																
83		Pour 4th Deck	2 days?	Mon 3/12/07	Tue 3/13/07																
84		Pour 5th Deck	2 days?	Wed 3/14/07	Thu 3/15/07																
85		Install Deck, Angle	, Studs - 8 days?	Wed 3/21/07	Fri 3/30/07																
86		Install Steel Stair #	2 20 days?	Wed 3/21/07	Tue 4/17/07																
87		Pour Penthouse	2 days?	Mon 4/2/07	Tue 4/3/07																
88		Complete Concrete	Pours 0 days	Tue 4/3/07	Tue 4/3/07											<b>4</b> /3					
89		Façade & Roof	98 days?	Wed 4/4/07	Thu 8/16/07																
90		Precast	51 days?	Wed 4/4/07	Wed 6/13/07																
91		Metal Stud Framing	g/Sheath 25 days?	Wed 4/4/07	Tue 5/8/07																
92		Install Curtinwall, R	ibbon W 83 days?	Wed 4/25/07	Thu 8/16/07																
		· 	l			I					:			:		;	:			:	
Project:	extended	l schedule.mpp	Task		Progress			Summary		•	External Tas			De	eadline	7					
Jate: Tu	ue 11/28/0	Jb	Split		Milestone	•		Project Sumr	mary		External Mile	estone 🔶									

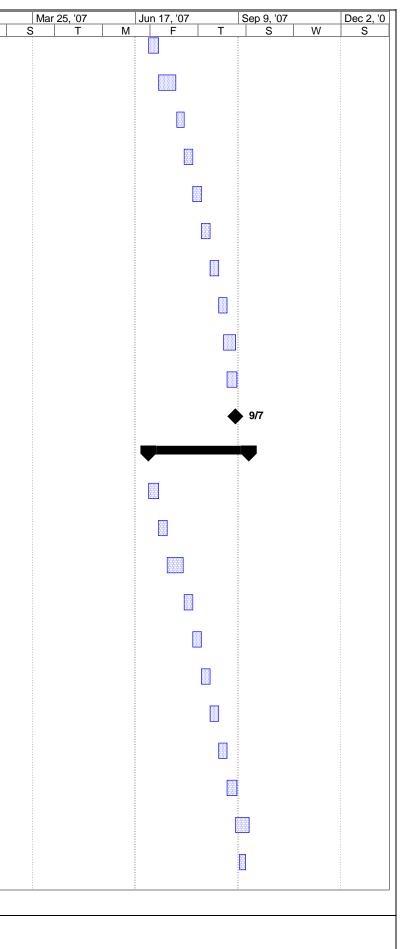
ID	Technica	Abasin Nante I Assignment 2	Duration	Start	Finish		Dec 31, '06 S W
93	12 of 27	Install PH Roofing	10 days?	Wed 5/9/07	Tue 5/22/07		0   11
94		Roofing @ Main Roof	21 days?	Thu 6/7/07	Thu 7/5/07		
95		Metal Panels	21 days?	Fri 7/6/07	Thu 8/2/07		
96		Equipment & Systems	235 days?	Tue 11/14/06	Fri 10/5/07		
97		Mobilize Sprinkler in Garag	0 days	Tue 11/14/06	Tue 11/14/06	◆ 11/14	
98		Set all PH HVAC Equipmer	5 days?	Wed 4/11/07	Tue 4/17/07		
99		Mechanical - Ductwork Ris	30 days?	Wed 4/11/07	Tue 5/22/07		
100		Set all PH Electrical Equipr	6 days?	Wed 5/23/07	Wed 5/30/07		
101		Set Elevator Equipment	6 days?	Wed 5/23/07	Wed 5/30/07		
102		Electrical - Bus Duct, Cond	32 days?	Wed 5/23/07	Thu 7/5/07		
103		Elevator & Cab Installation	93 days?	Thu 5/31/07	Fri 10/5/07		
104		Plumbing - Storm, Water, S	21 days?	Fri 7/6/07	Thu 8/2/07		
105		Sprinkler - Standpipe	15 days?	Fri 8/3/07	Thu 8/23/07		
106		Lobby	114 days?	Wed 4/18/07	Fri 9/21/07		
107		Layout Walls	5 days?	Wed 4/18/07	Tue 4/24/07		
108		Install Ductwork Above Cei	5 days?	Wed 4/25/07	Tue 5/1/07		
109		Install Elevator Entrances	2 days?	Wed 4/25/07	Thu 4/26/07		
110		Install Sprinkler Above Ceili	5 days?	Wed 5/2/07	Tue 5/8/07		
111		Install Lighting Rough Abov	5 days?	Wed 5/9/07	Tue 5/15/07		
112		Frame Walls	5 days?	Wed 5/16/07	Tue 5/22/07		
113		Frame Ceilings & Bulkhead	11 days?	Wed 5/23/07	Wed 6/6/07		
114		Rough-in MEP to Ceilings {	7 days?	Thu 6/7/07	Fri 6/15/07		
115		MEP & Colse-in Inspection	5 days?	Mon 6/18/07	Fri 6/22/07		
Droiget	ovtondad	schodulo mpp Task			Progress	Summary External Tasks Deadline	• 1
FIUJECT:	extended ue 11/28/0	schedule.mpp			Milestone	Project Summary External Milestone	$\checkmark$



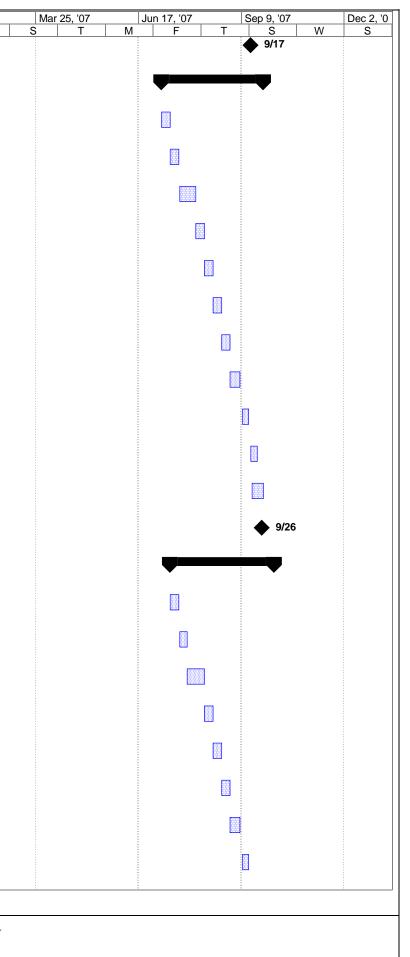
ID	Michael	Abasin Mante al Assignment 2	Duration	Start	Finish	4, '05     Nov 6, '05     Jan 29, '06     Apr 23, '06     Jul 16, '06     Oct 8, '06     Dec 3       S     T     M     F     T     S     W     S     T     M     F     T     S	
116	13 of 27	Hang Drywall Ceilings, Wa	5 days?	Fri 7/6/07	Thu 7/12/07		W
117		Finish Drywall	10 days?	Mon 7/16/07	Thu 7/26/07		
118		Install Terrazzo Flooring &	10 days?	Fri 7/27/07	Thu 8/9/07		
119		Finish Paint	5 days?	Fri 8/10/07	Thu 8/16/07		
120		Install Millwork Panels	16 days?	Fri 8/17/07	Fri 9/7/07		
121		Install Glass Panels	5 days?	Mon 9/10/07	Fri 9/14/07		
122		Final Touchup of all Finishe	5 days?	Mon 9/17/07	Fri 9/21/07		
123		Complete Main Lobby	0 days	Fri 9/21/07	Fri 9/21/07		
124		Plaza Level	57 days?	Thu 6/14/07	Thu 8/30/07		
125		Fames Cores	5 days?	Thu 6/14/07	Wed 6/20/07		
126		Rough-in / Close-in	5 days?	Thu 6/21/07	Wed 6/27/07		
127		Hang & Finish Drywall	11 days?	Thu 6/28/07	Thu 7/12/07		
128		Frame Ceilings	5 days?	Fri 7/13/07	Thu 7/19/07		
129		Hang Drywall Ceilings	5 days?	Sat 7/21/07	Thu 7/26/07		
130		Finish Drywall Ceilings	5 days?	Fri 7/27/07	Thu 8/2/07		
131		Bathroom Tile	5 days?	Fri 8/3/07	Thu 8/9/07		
132		Bathroom Paint	5 days?	Fri 8/10/07	Thu 8/16/07		
133		Bathroom Fixtures & Partiti	5 days?	Fri 8/17/07	Thu 8/23/07		
134		Perimeter Fire Caulk & Frai	7 days?	Fri 8/17/07	Mon 8/27/07		
135		Accessories & Trim	5 days?	Fri 8/24/07	Thu 8/30/07		
136		Complete Plaza Level	0 days	Thu 8/30/07	Thu 8/30/07		
137	_	2nd Floor	58 days?	Thu 6/21/07	Fri 9/7/07		
138		Fames Cores	5 days?	Thu 6/21/07	Wed 6/27/07		
	1	· · · · · · · · · · · · · · · · · · ·			Drogross		
Project:	extended ue 11/28/0	schedule.mpp Task 06 Split			Progress Milestone	Summary External Tasks Deadline   Project Summary External Milestone	$\hat{\nabla}$



	Technica	Abasin Nante Il Assignment 2	Duration	Start	Finish		Dec 31, S
139	14 of 27	Rough-in / Close-in	6 days?	Thu 6/28/07	Thu 7/5/07		<u> </u>
140		Hang & Finish Drywall	10 days?	Fri 7/6/07	Thu 7/19/07		
141		Frame Ceilings	5 days?	Sat 7/21/07	Thu 7/26/07		
142		Hang Drywall Ceilings	5 days?	Fri 7/27/07	Thu 8/2/07		
143		Finish Drywall Ceilings	5 days?	Fri 8/3/07	Thu 8/9/07		
144		Bathroom Tile	5 days?	Fri 8/10/07	Thu 8/16/07		
145		Bathroom Paint	5 days?	Fri 8/17/07	Thu 8/23/07		
146		Bathroom Fixtures & Partiti	5 days?	Fri 8/24/07	Thu 8/30/07		
147		Perimeter Fire Caulk & Fra	8 days?	Tue 8/28/07	Thu 9/6/07		
148		Accessories & Trim	6 days?	Fri 8/31/07	Fri 9/7/07		
149		Complete 2nd Floor	0 days	Fri 9/7/07	Fri 9/7/07		
150		3rd Floor	59 days?	Thu 6/28/07	Mon 9/17/07		
151		Fames Cores	6 days?	Thu 6/28/07	Thu 7/5/07		
152		Rough-in / Close-in	5 days?	Fri 7/6/07	Thu 7/12/07		
153		Hang & Finish Drywall	10 days?	Fri 7/13/07	Wed 7/25/07		
154		Frame Ceilings	5 days?	Fri 7/27/07	Thu 8/2/07		
155		Hang Drywall Ceilings	5 days?	Fri 8/3/07	Thu 8/9/07		
156		Finish Drywall Ceilings	5 days?	Fri 8/10/07	Thu 8/16/07		
157		Bathroom Tile	5 days?	Fri 8/17/07	Thu 8/23/07		
158		Bathroom Paint	5 days?	Fri 8/24/07	Thu 8/30/07		
159		Bathroom Fixtures & Partiti	6 days?	Fri 8/31/07	Fri 9/7/07		
160		Perimeter Fire Caulk & Frai	7 days?	Fri 9/7/07	Mon 9/17/07		
161		Accessories & Trim	5 days?	Mon 9/10/07	Fri 9/14/07		
Draiaat:	extended	schedule.mpp Task			Progress	Summary External Tasks Deadline	э



ID	<b>Te</b> chnica	Abasin Nante I Assignment 2	Duration	Start	Finish
162	15 of 27	Complete 3rd Floor	0 days	Mon 9/17/07	Mon 9/17/07
163		4th Floor	60 days?	Fri 7/6/07	Wed 9/26/07
164		Fames Cores	5 days?	Fri 7/6/07	Thu 7/12/07
165		Rough-in / Close-in	5 days?	Fri 7/13/07	Thu 7/19/07
166		Hang & Finish Drywall	10 days?	Sat 7/21/07	Thu 8/2/07
167		Frame Ceilings	5 days?	Fri 8/3/07	Thu 8/9/07
168		Hang Drywall Ceilings	5 days?	Fri 8/10/07	Thu 8/16/07
169		Finish Drywall Ceilings	5 days?	Fri 8/17/07	Thu 8/23/07
170		Bathroom Tile	5 days?	Fri 8/24/07	Thu 8/30/07
171		Bathroom Paint	6 days?	Fri 8/31/07	Fri 9/7/07
172		Bathroom Fixtures & Partiti	5 days?	Mon 9/10/07	Fri 9/14/07
173		Perimeter Fire Caulk & Frai	5 days?	Mon 9/17/07	Fri 9/21/07
174		Accessories & Trim	7 days?	Tue 9/18/07	Wed 9/26/07
175		Complete 4th Floor	0 days	Wed 9/26/07	Wed 9/26/07
176		5th Floor	62 days?	Fri 7/13/07	Fri 10/5/07
177		Fames Cores	5 days?	Fri 7/13/07	Thu 7/19/07
178		Rough-in / Close-in	5 days?	Sat 7/21/07	Thu 7/26/07
179		Hang & Finish Drywall	10 days?	Fri 7/27/07	Thu 8/9/07
180		Frame Ceilings	5 days?	Fri 8/10/07	Thu 8/16/07
181		Hang Drywall Ceilings	5 days?	Fri 8/17/07	Thu 8/23/07
182		Finish Drywall Ceilings	5 days?	Fri 8/24/07	Thu 8/30/07
183		Bathroom Tile	6 days?	Fri 8/31/07	Fri 9/7/07
184		Bathroom Paint	5 days?	Mon 9/10/07	Fri 9/14/07
Project <sup>.</sup>	extended	schedule.mpp Task			Progress
Noto: T	ue 11/28/0	6 Split			Milestone

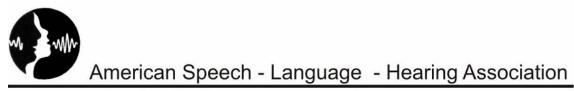


	Michael Technic	Abasin Nante al Assignment 2	Duration	Start	Finish	4, '05 S	Nov 6, '05 T M	Jan 29, '06	A S	pr 23, '06 W		II 16, '06 T M	Oct 8, '06	} ⊤ ∣	Dec 31, '06 S W	ar 25, '07 T	Jun 17, '07 M F	Sep 9
185	16 of 27	Bathroom Fixtures & Partiti	5 days?	Mon 9/10/07	Fri 9/14/07			 			0					 <u> </u>		
186		Perimeter Fire Caulk & Frai	5 days?	Mon 9/24/07	Fri 9/28/07	-												
187		Accessories & Trim	7 days?	Thu 9/27/07	Fri 10/5/07	-												
188		Complete 5th Floor	0 days	Fri 10/5/07	Fri 10/5/07	-												
189		Final Testing & Punchlist	18 days?	Mon 10/8/07	Wed 10/31/07	-												l
190		Elevator Inspection	5 days?	Mon 10/8/07	Fri 10/12/07	-												
191		Plumbing Final	2 days?	Mon 10/8/07	Tue 10/9/07	-												
192		Mechanical Final	2 days?	Mon 10/8/07	Tue 10/9/07	-												
193		Sprinkler Final	2 days?	Mon 10/8/07	Tue 10/9/07	-												
194		Electrical Final	2 days?	Mon 10/15/07	Tue 10/16/07	-												
195		Fire Marshall Inspection	4 days?	Wed 10/17/07	Mon 10/22/07	-												
196		Building Final	1 day?	Tue 10/23/07	Tue 10/23/07													
197		Site Inspection	2 days?	Mon 10/29/07	Tue 10/30/07													
198		Certificate of Occupancy In	1 day?	Wed 10/31/07	Wed 10/31/07													
199		WEATHER ALLOWANCE	15 days?	Thu 11/1/07	Wed 11/21/07													

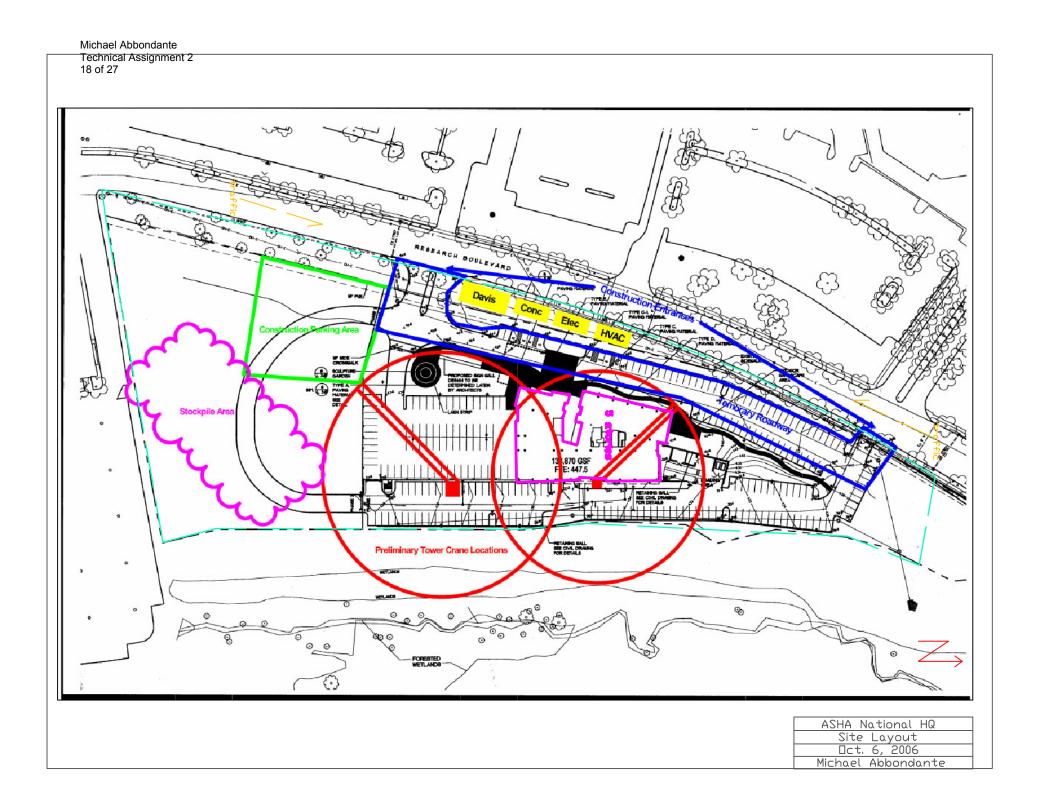


Michael Abbondante Technical Assignment 2 17 of 27

**Appendix B:** 



AtSite Real Estate



Michael Abbondante Technical Assignment 2 19 of 27

## Appendix C:



	North Elevation			
Material	Sq. Ft.	Cost/Sq. Ft.	Total Cost	
MP-1	3084	23	70932	
GL-9	1344	18.25	24528	
GL-8	13464	16.23	218520.72	
GL-4T	360	7.25	2610	
GL-4	1208	5.7	6885.6	
GL-3	3024	19.5	58968	
GL-2	0	18.4	0	
GL-1	10368	16.35	169516.8	
PCC-3	6376.4	21.5	137092.6	
PCC-2	4620	23.43	108246.6	
PCC-1	1260	23.89	30101.4	
			827401.72	

			021401.12
South Elevation			
Material	Sq. Ft.	Cost/Sq. Ft.	Total Cost
MP-1	624	23	14352
GL-9	2536	18.25	46282
GL-8	4336	16.23	70373.28
GL-4T	0	7.25	0
GL-4	0	5.7	0
GL-3	4101	19.5	79969.5
GL-2	6984	18.4	128505.6
GL-1	15384	16.35	251528.4
PCC-3	1940	21.5	41710
PCC-2	7960	23.43	186502.8
PCC-1	1260	23.89	30101.4
			849324.98

	01002.000				
East Elevation					
Material	Sq. Ft.	Cost/Sq. Ft.	Total Cost		
MP-1	1144	23	26312		
GL-9	1560	18.25	28470		
GL-8	3024	16.23	49079.52		
GL-4T	0	7.25	0		
GL-4	0	5.7	0		
GL-3	1492	19.5	29094		
GL-2	2900	18.4	53360		
GL-1	2720	16.35	44472		
PCC-3	0	21.5	0		
PCC-2	4668	23.43	109371.24		
PCC-1	5980	23.89	142862.2		
	483020.96				

West Elevation				
Material	Sq. Ft.	Cost/Sq. Ft.	Total Cost	
MP-1	5120	23	117760	
GL-9	5900	18.25	107675	
GL-8	9080	16.23	147368.4	
GL-4T	0	7.25	0	

Michael Abbondante Technical Assignment 2 21 of 27

GL-4	0	5.7	0
GL-3	1160	19.5	22620
GL-2	2780	18.4	51152
GL-1	1008	16.35	16480.8
PCC-3	0	21.5	0
PCC-2	3360	23.43	78724.8
PCC-1	4620	23.89	110371.8
			652152.8

Total Cost:

2952647

Michael Abbondante Technical Assignment 2 22 of 27

**Appendix D:** 



American Speech - Language - Hearing Association

AtSite Real Estate

Concrete Slabs				
Depth	Strength	Location	Cu. Yards	
6"	3500	B2	468.85	
4"	5000	B1	459.3	
4"	5000	Plaza	226.4	
4"	5000	2	254.39	
4"	5000	3,4,5	280.6*3	
			Total	
			1785.49	

Footings			
Depth	Strength	Location	Cu. Yards
2'8"	3000	1	22.66
2'4"	3000	2	12.79
2'4"	3000	3	5.76
3'6"	3000	4,5,6	5.76
3'	3000	7	85.39
			30.69
			Total
			157.29

	Columns (concrete)			
Size	Amount	Length	Cu. Yards	
18x30	189	10'	262.5	
24x21	20	10'	25.9	
18x24	10	10'	12.5	
30x30	2	10'	1	
			Total	
			300.46	

	Columns (steel)				
Size	Amount	Length	L.F.	Cost	
12x58	20	15'			
	40	13.5'	840	13398	
12x65	5	15'			
	10	13.5'	210	3,757	
12x53	2	15'			
	22	13.5'	327	4766	
14x90	6	15'			
	12	13.5'	252	6237	
14x82	4	15'			

Michael Abbondante Technical Assignment 2 24 of 27

	8	13.5'	168	3788.4
14x132	1	15'	15	544.5
14x99	1	15'	15	408.3
14x74	1	15'	15	305.25
12x72	4	15'		
	8	13.5'	168	3326
12x45	2	15'		
	3	13.5'	70.5	872.4
12x80	72	13.5'	972	21384
14x43	18	13.5'	243	2873.4
14x53	24	13.5'	324	4722
14x48	12	13.5'	162	2138.4
14x68	12	13.5'	162	3029.4
14x61	15	13.5'	220	3690.5
				Total

Decks			
16-18 Guage	S.F.		
	B1	37206	
	Plaza	18343.8	
	2	20606.25	
	3,4,5	22727.49	
		Total	
		98882.49	

Reinforcement						
WWF	WWF Location S.F.					
	B2	25318				
Rebar		Tons				
		150				

	Forms					
Location	Perimeter	Depth	S.F.			
B2	1197	6"	598.5			
B1	1031	4"	343.663			
Plaza	1017	4"	338.999			
2	676	4"	225.333			
3,4,5	668	4"	667.99			
			Total			
			2174.48			

Michael Abbondante Technical Assignment 2 25 of 27

468.85	3.31E+10	ormal weigh				C.Y.	\$38,445.70	\$0.00	\$0.00	\$38,445.70	\$42,196.50	Union	2005
1,785.50	3.31E+10	ormal weigh				C.Y.	\$160,695.00	\$0.00	\$0.00	\$160,695.00	\$176,764.50	Union	2005
157.29	3.31E+10	ormal weigh				C.Y.	\$12,740.49	\$0.00	\$0.00	\$12,740.49	\$13,998.81	Union	2005
300.46	3.31E+10	rmal weight				C.Y.	\$25,238.64	\$0.00	\$0.00	\$25,238.64	\$27,792.55	Union	2005
98,882.49	5.31E+10	iits, galvaniz	E4	1,350	0.024	S.F.	\$805,892.29	\$89,983.07	\$5,932.95	\$901,808.31	\$1,053,098.52	Union	2005
25,318.00	3.22E+10	- W2.9 x W	2 Rodm	29	0.552	C.S.F.	\$835,494.00	\$531,678.00	\$0.00	\$1,367,172.00	\$1,784,919.00	Union	2005
2,174.48	3.11E+10	od, 12" wide	C2	275	0.175	SFCA	\$3,979.30	\$12,611.98	\$0.00	\$16,591.28	\$24,028.00	Union	2005
150	3.21E+10	, #8 to #18,	4 Rodm	3.6	8.889	Ton	\$108,000.00	\$50,250.00	\$0.00	\$158,250.00	\$202,500.00	Union	2005
							0	0	0	0	0		
		Totals					\$1,990,485.42	\$684,523.05	\$5,932.95	\$2,680,941.42	\$3,325,297.88		

75237.3\*

\*plus cost of tons of steel: assumed \$550/ton from outside source

Total Structural Est.

2065722.72

# **Appendix E:**



#### Michael Abbondante Technical Assignment 2 27 of 27

Position	Months/Year	Staffing Salary/Week	Price/Month	Amount/Year	Amout Over Job Period
	12	2875	11500	138000	276000
Project Manager					
Assistant Project Manager	12	2525	10100	121200	242400
Superintendent	12	2325	9300	111600	223200
Field Engineer	12	1550	6200	74400	148800
					890400
		ice Support			
Material	Desc.	Cost/Month	Amount/Year		Amount Over Job Period
Trailer	Rented 32'x8'	180	2160		4320
Office Equipment Rental avg.	n/a	157	1884		3768
Office Supplies	n/a	93.5	1122		2244
Telephone	n/a	224	2688		5376
Field Office Lights & HVAC	n/a	108	1296		2592
					18300
	Temp	orary Utilities			
Material	Desc.	Cost/Month	Amount/Year		Amount Over Job Period
Heat	inclu. Fuel and operation for 12hrs	11.25	135		270
Lighting	inclu. Service lamps wiring & outlets	16.8	201.6		403.2
Power for Job Duration	inclu. Elevator etc.	51.5	618		1236
Toilet	Portable Chemical	11.4	136.8		273.6
	•				2182.8
	Во	nds & Fees			
Option	Desc.	%			Amount Over Job Period
Permit	General	1			230000
Performance Bond	For Buildings	2			460000
Insurance	Builders Risk, standard	0.24			55200
	Public Liability, average	2.02			464600
	, · · · · · · · · · · · · · · · · · · ·				1209800

	General		
Rented Material	Desc.	Cost	Cost on Site
Dumpster	2 Recycling Dumpsters	450/ Month	10800
20T Crane	n/a	5800/Month	46400
Tower Crane	150' Boom	2625/Month	7875
Fence	3408L.F. 6' High	6.75/L.F.	23004
			00070

Total GC Cost:
2208761.8