

**Acme Builders**  
**Jones Office Building**

**Monthly Update Schedule Narrative**  
August 2009  
S01B

**INTRODUCTION**

This narrative is written to support Acme Builder's Jones Office Building August 09' Update Schedule S01B with a data date of 9/9/09.

<b>Dates:</b>	<b>Contract</b>	<b>Projected</b>
S01B End Project Milestone:	04/06/11	06/26/11 (-59 work days)

This update schedule had been impacted with the two major delays on the project, the changes to the underground live mechanical lines at the south end of the site and the changes to the design of the Edison retaining wall.

**CRITICAL PATH**

**Most Critical (-59 work days)**

The critical path of the update schedule did change with the redesign of the Edison wall footing as tracked under SB Ref. #6. Since the Edison wall footing must now complete prior to the excavation and forming of the main building footings, the critical path now runs through the Edison wall. It then runs, as it did in the original baseline, through footings, followed by steel erection to the removal of the crane. It then goes through the completion of the cast-in-place concrete footings and walls at the auditorium, the backfill and grading of the interior of the auditorium, the slab-on-grade, in the auditorium, and the raised floor in the auditorium, the framing in the auditorium, scaffolding, painting, OH ducts, the sound reflector framing, electrical and other work off the scaffolding in the auditorium. It continues through the drywall and finish of the sound reflectors, the electrical trim, and any other work from the scaffolding, the removal of the scaffolding, wall panels, casework, and other finishes of the auditorium and finally through the flooring and seating, completing with the punchlist activities.

**Main Building Path (-54 work days)**

The second important path, the path through the main building, has not changed thru August 09, but has slipped along with the rest of the schedule. This path remains as it was in the baseline. As with the longest path above, this path is also through the footings, and steel erection, but then continues through the welding of the structural steel and the concrete decks. It then goes through the curtain wall, roofing, and dry-in, and then through the insulation and drywall throughout the main building. It continues through finishes and punch list of the basement floor, as this is the last floor in our sequence. We begin our floor

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finish and overhead work sequence on the 1st floor through the 6th and then back to the basement to finish.

**IMPACTS/FRAGNETS****Fragnet F01: Unforeseen Conditions and Design Changes to Live South End Mechanical Lines**

When beginning to plan for relocating the live hydronic piping at the south end of the site, discrepancies were noted between the notes on the drawings concerning relocation of pipe, the design of the retaining wall along the south end, the location of the pipes, and actual field conditions. Upon further investigation and after much exploratory excavation, old shoring and concrete structures referred to as “fins” were discovered along the south end. All of this culminated in a complete redesign of the new hydronic piping and a new plan to keep existing lines live with temporary service until new lines are installed. A direction to proceed with this work (called Option #1 in RFI #67) was covered in Jones Contract Modification No. 1. The main impact to the schedule was that, unlike the original plan, the new plan required that pipes be relocated prior to excavation down to footing level. Also, added work such as a new 12” condenser water line must now be installed in lieu of 10” along with a new 8” chilled water line that was to remain existing for us to tie-in to only. Also, the location of POC’s at both ends of the hydronic lines has changed due to existing conditions and site work, adding approximately 100’ of pipe to each of the lines. All of these changes will be covered in an Acme COR for PCO #SB-006 and SB-009. Please see the fragnet/added activities listed below, which reflect these changes in the August 09 Update schedule:

**Added Activities**

<b>X01-0170</b>	<b>RFI-067 Existing Mech Lines</b>
<b>X01-0180</b>	<b>RFI-082 Existing Conc. Pilasters &amp; Cantilevered Shoring Sys</b>
<b>X01-0190</b>	<b>RFI-067A Bld-306 &amp; 318 HVAC Piping Shutdown Date &amp; Duration</b>
<b>X01-0230</b>	<b>RFI-067B Bld-306 &amp; 318 HVAC Piping Shutdown Options</b>
<b>X01-0430</b>	<b>Ltr from Xcel re: Options &amp; ROM for Mech Piping</b>
<b>X01-0460</b>	<b>Detail existing HVAC lines RFI 67</b>
<b>X01-0480</b>	<b>Expose S/W area for Hot Taps</b>
<b>X01-0490</b>	<b>Install Pipe support Rack</b>
<b>X01-0440</b>	<b>Jones Issues Unilateral Modification Order No. 1</b>
<b>X01-0470</b>	<b>Proceed with RFI 67B</b>
<b>X01-0500</b>	<b>Install Sch. 80 PVC on Rack</b>
<b>X01-0450</b>	<b>SB Authorized Xcel to Proceed with Option-1</b>
<b>X01-0510</b>	<b>Excavate for thrust blocks</b>
<b>X01-0520</b>	<b>Weld in Hot Tap Stub Flanges in Central Plant</b>
<b>X01-0530</b>	<b>Weld in Hot Taps Stub Flanges at S/W</b>
<b>X01-0540</b>	<b>Install Valves and Hot Taps at Central Plant</b>
<b>X01-0580</b>	<b>Install Temp Tie in Manifolds 09-Aug-07</b>
<b>X01-0590</b>	<b>Install Flex hose lines</b>
<b>X01-0550</b>	<b>Install Valves and Hot Taps at S/W</b>

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<b>X01-0560</b>	<b>Form and place rebar for thrust blocks</b>
<b>X01-0570</b>	<b>Place concrete for thrust blocks</b>
<b>X01-0600</b>	<b>Fill and test Hot water</b>
<b>X01-0610</b>	<b>Run 48-hour live test on Hot water</b>
<b>X01-0620</b>	<b>Line stop, install valve, cut loose (E) hot water</b>
<b>X01-0630</b>	<b>Fill and test Chilled water</b>
<b>X01-0640</b>	<b>Run 48 hour live test on Chilled water</b>
<b>X01-0660</b>	<b>Fill and test Condenser water</b>
<b>X01-0670</b>	<b>Run 48-hour live test on condenser water</b>
<b>X01-0650</b>	<b>Line stop, install valve, cut loose (E) chilled water</b>
<b>X01-0680</b>	<b>Demo (E) Hws/r Chws/r, Cws/r Piping</b>
<b>X01-0690</b>	<b>Load &amp; Haul HVAC Piping</b>

**Affected Activities****SIT-0510      Cut Bench for Soldier Beams, Site**

This fragnet was modeled by adding RFI's, Letters, Directives or other documents on the dates that they actually occurred using constraints and by adding activities for the added work created by the changes to the design or as directed. The added work is then linked back into the original schedule with a FS tie between **Act. X01-0690 Load & Haul HVAC Piping** and **Act. SIT-051 Cut Bench for Soldier Beams, Site** as this was the activity delayed by the added work.

This fragnet is complete as of this update but was at -12 days of float as of the end of August 09.

**Fragnet-F02 Changes to Design of Edison Wall**

Several RFI's were written and were answered concerning the retaining wall along the Edison substation enclosure. The A/E team, while investigating these RFI's, discovered that the footing for the Edison wall encroached into Edison property and into existing Edison footings. Therefore, the footing for the Edison wall required a redesign whereby the footing was changed from a T-shape to an L-shape footing since an L-shape no longer encroached into Edison's substation enclosure. However, this also meant the Edison wall footing was now moved to the west and was very much closer to the main building footings such that the excavation for the Edison wall footing now interfered with the excavation and re-compaction for the main building footings. Before this change, the two sets of activities had been more or less independent. This had a very large impact to the schedule as the Edison wall excavation now impacts the start of the excavation of the main building. We cannot commence removal and re-compaction of earth on the east site until the Edison wall is poured, cured, and ready for backfill. There was also added work in over-excavation for the Edison wall footing and the placing of slurry below it per direction of the Soils Engineer of Record. There was also some added work to demo the storm drain that runs along the Edison wall as it was discovered that it was encased in concrete and is much deeper than shown on the Contract Drawings.

**Added Activities**

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X02-0110	SB Ltr/Notification of Release of Edison Wall
X02-0120	RFI-064A Edison Wall and HV Tower
X02-0130	RFI-064 Edison Wall Layout
X02-0140	RFI-075 Edison Wall Earthwork, Foundation & Backfill
X02-0150	RFI-083 Edison Wall Grading
X02-0160	Jones Issue TDM-01
X02-0170	Jones Issue Revised TDM-01-R1
X02-0180	Jones Issues Revised SCE Wall Section Detail
X02-0190	Re-Engineer Ret Wall
X02-0200	Jones Review & Approve Ret Wall Shp Dwgs
X02-0205	Added Excavation & Demo at Storm Pipe
X02-0270	Email A/E Place Hold on Ret Wall Shp Dwgs
X02-0280	Email A/E Direction to Disregard Note on Ret Wall Shp Dwgs
X02-0290	Email Jones Direction to Proceed with Redesign
X02-0300	Fabricate Rebar
X02-0210	Slope Cut Existing Grade per New Ftg Detail
X02-0220	Over-X at Wall per Soils Recommendation
X02-0230	Inspect and Spread Spoils to Allow Work Cont
X02-0240	Slurry per Soils Recommend
X02-0250	Excavate Thru Slurry
X02-0260	Haul Out Slurry

**Affected Activities**

SIT-0120	FRP Ftg for Edison Retaining Wall
SIT-0130	Cure & WtrProf Edison Wall
SIT-0090	Remve/Recmpct Main Bldg East, Site

This fragnet was modeled by adding RFI's, Letters, Directives or other documents on the dates that they actually occurred using constraints and by adding activities for the added work created by the changes to the design or as directed. These new activities were tied back into the original schedule with a tie between **Act. X02-0260 Haul Out Slurry** and **Act. SIT-0120 FRP Ftg for Edison Retaining Wall**. Another more significant tie was added between **SIT-0130 Cure & WtrProf Edison Wall** and **Act. SIT-0090 Remve/Recmpct Main Bldg East, Site** since the removal and re-compaction cannot commence until the Edison wall is ready for backfill. This tie is what most significantly impacts the schedule.

This fragnet is now, by far, the most critical and the longest path of the project at -59 days of float as of this update. It is concurrent with and supersedes Fragnet F001 and is currently driving the project schedule.

**MITIGATION**

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Due to the nature of these delays being so early in the project and delaying the start of foundations, mitigation was confined only to expediting the work. No changes to the schedule were available to expedite the work.

**SUMMARY**

Schedule **S01B** is the working schedule of the project derived from the pure baseline, B00B. This update includes the two large impacts, the changes to the south end mechanical and the changes at the Edison wall. As of the end of August 09, the Edison wall is on the critical path and has pushed our critical path to a -59 work days (or 81 calendar days). Other than the Edison wall fragnet and overall slip, the critical path remains unchanged.

Other than the lists of impact/fragnet activities above, we have not made changes to the schedule.

Please contact us if you have any questions or concerns.

Sincerely,

Neal C. Wickham  
*Points West Consulting*