

Combined Existing Construction Conditions

Executive Summary

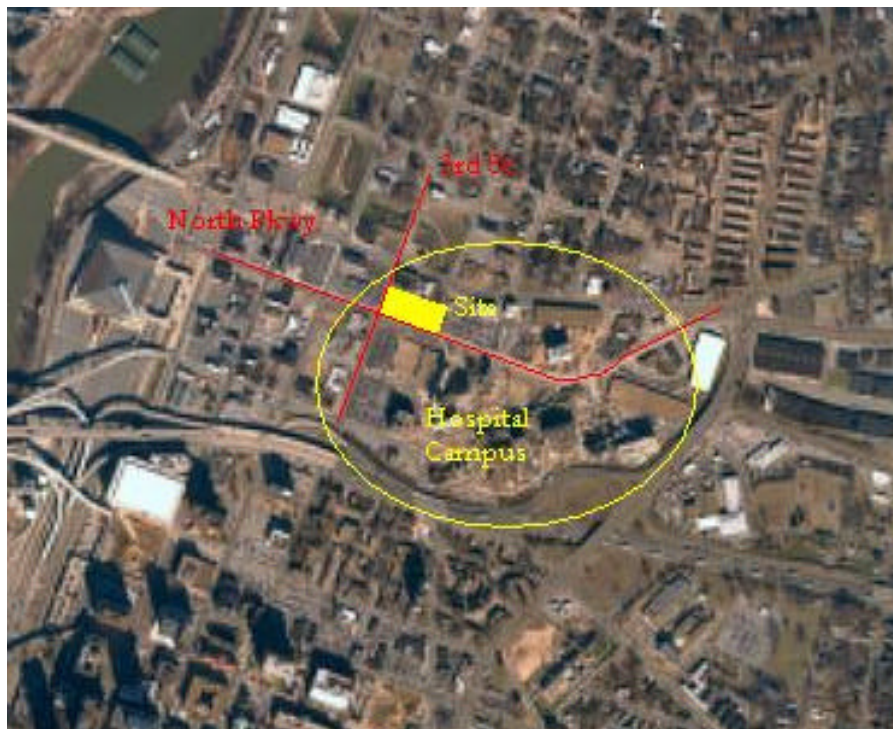
The St. Jude Facility is progressing fairly well thus far. Part of St. Jude's Campus Master Plan for expansion, the cGMP Facility seems to be fulfilling the Owner's expectations. The project is currently on time and is meeting the budget and there have been no problems with maintaining the strict cGMP quality standards thus so far. Some unexpected problems with the soil have been encountered, the engineers were able to remedy the situation. Other issues have been dealing with the constrictive site and the parking on and around the site. If the project continues to progress as it so far, St. Jude, The Austin Company and the community should be very pleased with the outcome.

Existing Construction Conditions

(Reference previous assignment dated September 23, 2002 for basic analysis of project delivery system, project schedule and project cost evaluation.)

Site Plan & Conditions

This cGMP (current Goods Manufacturing Practices) Facility site is located on the northeast corner of Third Street and North Parkway on the St. Jude Children's Hospital Campus in Memphis, TN, just east of the Mississippi River. In the aerial photograph below, you can see the two roads (North Parkway and Third Street) on which the site is located. The large circle indicates the basic outline of the St. Jude Campus and it is clear that the new facility will be located on the northeastern corner of the Campus.



Aerial Photograph of St. Jude Campus in downtown Memphis, TN

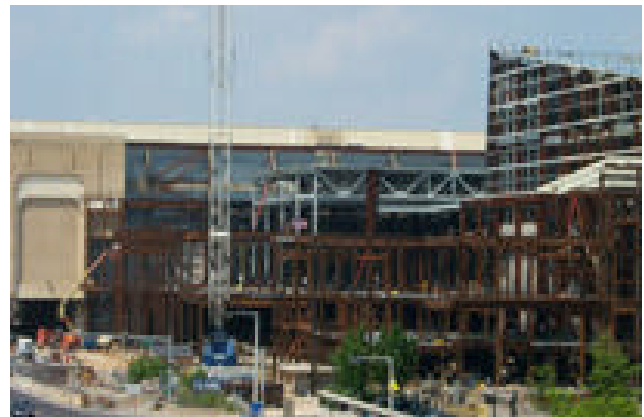
The main problem with the site is that it is extremely constricted. This has caused ongoing problems with parking on and around the site. Only foremen and superintendents are allowed to park onsite with everyone else being directed to other lots nearby. The limited site space also meant that at times during the construction of the precast, the surrounding roads needed to be closed in order for the crane to access the southern and western perimeters of the building. Attached at the end of this report, a Site Plan shows the layout of the site during construction. From that plan, it is clear that space on this site is a valuable commodity.

Local Market Conditions

There are several other building projects going on during the construction of this cGMP Facility. St. Jude themselves recently wrapped up one of their largest projects, an Integrated Research Center, on their own campus. Also, there is current construction being done on the AutoZone Baseball Stadium (see picture below), Memphis Cook Convention Center (see picture below, right), renovation of Central Station, construction of Peabody Place Entertainment and Retail Center (see picture below, left) and also the construction of the new Arena for the Memphis Grizzlies, the city's professional basketball team. The building construction in the city is actually slightly less than it has been in past years and there haven't seemed to be any conflicts with the cGMP Facility construction thus far. Since there are less construction jobs going on than usual, the labor market is adequate and there haven't been any problems finding workers for the job. There have been some problems with an increased amount of road construction in Memphis but, so far, no conflicts were serious enough to cause delays.



Peabody Place Entertainment Center



Memphis Cook Convention Center



AutoZone Baseball Stadium

All of the new construction and renovation is a mix of both public and private development projects, but the vast majority of projects in downtown Memphis are private investments. With 57 skyscrapers in total, steel frame construction is commonly found in the city. Precast construction is also found frequently in downtown Memphis.

On this project, Austin has hired both union and non-union contractors. They even have an interesting 'combination' on the project where Morgan & Turner, Austin's union mechanical subcontractor subbed out Knight & Wilson, a non-union contractor, to do the sheet metal work. Despite this, there haven't been any significant problems between the contractors nor have there been any labor disputes of any kind.

Due to the lack of space onsite, recycling on the project is basically non-existent, except for a few individuals taking excess materials home to be sold or recycled on a very small scale basis, since there is no room onsite to store materials. Although there is a section in the contract that allows a certain amount of offsite storage space for building material to be paid for by St. Jude, the building materials (steel, precast, etc.) more than fill the allotted space so there is simply no room for recyclable materials.

As mentioned before, the constricted site has caused dilemmas as far as parking for workers and visitors. There is barely enough room for the foremen and superintendents to park onsite. St. Jude allowed the use of another parking lot one block west of the project for the rest of the workers. During the most recent stages of the project when more workers have been coming onsite, they've begun to overflow their workers into a third lot a block north which was unused. The parking conditions in Memphis are a topic of constant debate since there simply isn't enough room for all of the vehicles downtown. Although the site parking conditions are less than desirable, compared to the rest of Memphis, the workers on this site are fortunate.

Subsurface/Soils



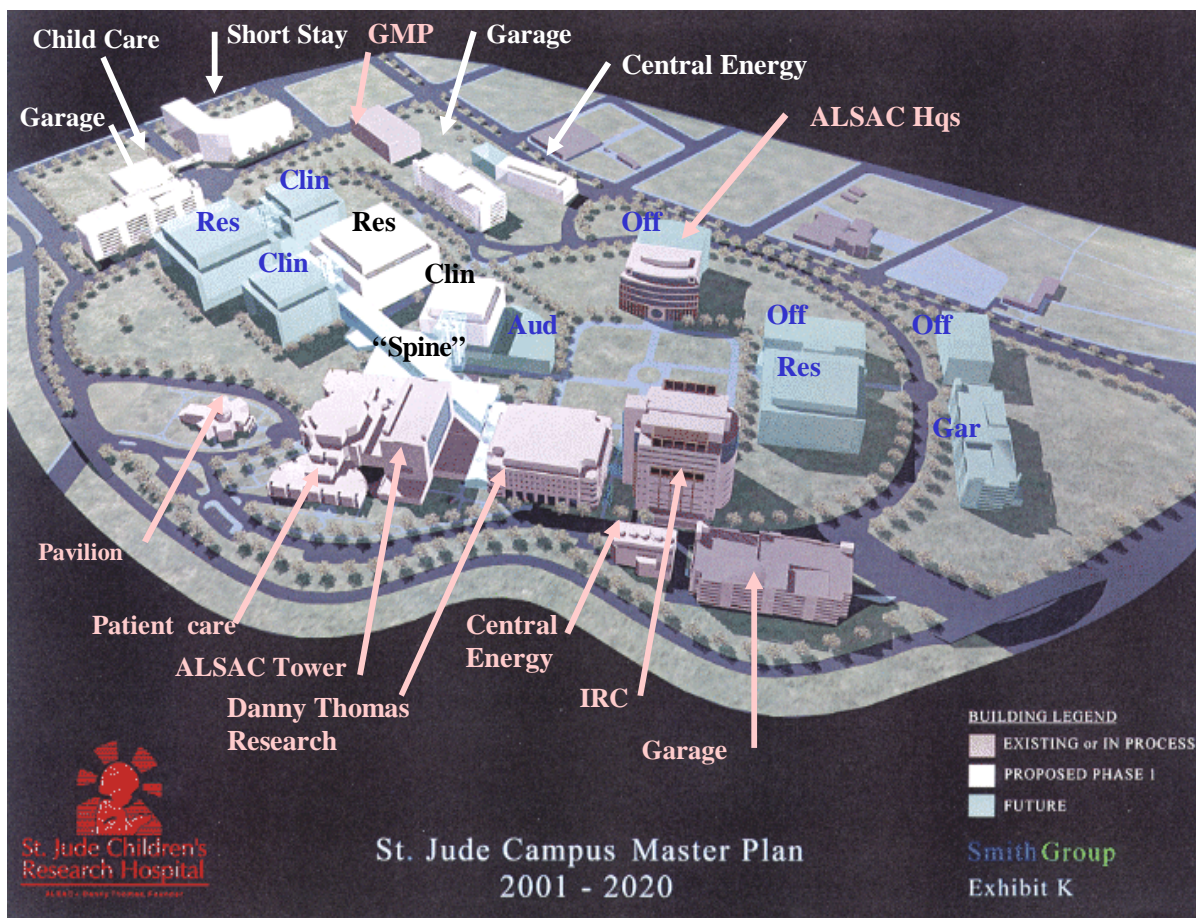
Facility and Site Overlaid on Existing Parking Lot (courtesy of The Austin Company)

The site for the new pharmaceutical facility used to be a parking lot for St. Jude Children's Hospital (see picture above). Based on the preliminary soil samples taken by PSI (Austin's testing consultant), it was decided to excavate the entire site down three feet and replace it

with CR610 gravel which gave a very stable surface on which to work. The building is supported on auger cast piles that range in depth between 35 and 45 feet. During the beginning of construction, when the piles were being driven, indestructible obstructions were hit which forced the engineers to redesign the pile layout and pile caps at these places. Because of this, the structural foundation plan is fairly haphazard looking since the original configuration was changed. Due to its proximity to roads and parking areas, three foot undercuts were installed to provide stable surfaces for paving operations. As construction continued, the workers found several soft spots which they are currently in the process of correcting.

Client Information

St. Jude Children's Hospital prides itself on being one of the most advanced pediatric care facilities in the world. They are dedicated to finding cures for catastrophic diseases that afflict children. In order to maintain their world-renown reputation, they have put together a \$1 billion expansion master plan which includes approximately 1 million square feet of new office and research space. Part of their huge expansion plan is the GMP facility which can be seen in the layout below.



St. Jude Campus Master Expansion Plan (courtesy of St. Jude Children's Hospital)

Obviously, cost, quality, schedule and safety are all important expectations for an Owner on any project. However, extremely high quality and reaching schedule goals are the two top priorities for St. Jude. Sequencing concerns of the Owner have to do with limiting the time for road closures and also making sure the lab area is finished before the office area since the labs need to be validated. Being such a complex laboratory and research facility, this building will be required to meet certain classifications for air, pressure and room finish quality. The Owner, having dealt with this type of facility before, is well aware of the many restrictions and requirements to which the building must be designed. As such, there has been a lot of Owner involvement in the form of consultations with their cGMP Facilities director and the other Owner representatives.

Another important goal for both St. Jude and Austin will be to maintain the positive, charitable reputation that the hospital has achieved over the years. Do to their importance in the community and their reliance on donor and sponsor support, it is imperative that this reputation be upheld. Delays in schedule, extreme budget overruns or unprofessional worker behavior could all potentially taint St. Jude's fine reputation. Since this construction process will be widely followed in the media, even a small problem could be spread to the public and implied to be more than it is. To combat this, Austin has done a fine job so far of educating and updating the public on the progress of construction. Also, an onsite security service and plenty of informative signs help to regulate site activity and direct the public around the site.

The VP of Therapeutics Production, John Coleman, summed up their main reasons for choosing The Austin Company when he said, "We selected the Austin Company for its track record for successfully implementing complex projects on time and within budget. Austin also has experience in building facilities that comply with stringent federal cGMP standards, which will allow for a smooth building process." The key to completing the project to St. Jude's satisfaction would be to live up to Coleman's quote and complete the project on time and within budget while still meeting the strict cGMP standards.