

RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

July 31, 1972

Subject: Monitoring Report #1
Oakland Community College, Highland Lakes Campus
Mechanical and electrical renovation work

Project: 72:42

Monitored from Issue P1 dated July 27, 1972

Target completion date: October 1, 1973 (working day 447)

Actions taken:

- Inspected renovation areas
- Reviewed project procedure with Mr. Paul Kelly of Steve Kruchko Co.
- Prepared preliminary network model for D Building, C Building and tunnel work from B to D

General Summary

This session was devoted primarily to inspecting the area of renovation work and establishing various items to be diagrammed. Mr. Kelly and I also prepared a preliminary network model for the units mentioned above, establishing tentative starting dates for each major area of work.

The project basically consists of replacing the existing heating and cooling system with a new high temperature hot water heating and chilled water cooling system.

Some minor electrical demolition has started in the D Building. Mr. Kelly plans to start architectural demolition in the D unit on or about August 7, 1972 (working day 154) and to start water piping in the basement of the D Building about October 2, 1972 (working day 193). Shop drawings are now being submitted to Migdal Layne and Sachs (MLS) for the heat exchanger, pumps and trim for the basement mechanical room in the D Building.

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C Building gas train conversion units will be delivered to the site on or about September 5, 1972 and should be installed in the C Unit (new student center) in time to activate the C Unit boiler no later than October 2, 1972. Tunnel work will start on September 5, 1972 (working day 174) with installation of hangers and supports for high temperature and domestic water piping in the tunnel.

There are several major restraints that have been assumed on various elements of the work. Two of the more important are a time restraint to the 15th of May 1973 (working day 351) which represents the assumed summer shut-down of the heating system. Another is to the slow academic period anticipated by the 1st of June 1973 (working day 363) which is the approximate end of the spring semester.

Another key date is the delivery of new unit ventilators for the D Building, now assumed on or about February 1, 1973 (working day 278).

All of these restraints were incorporated along with the work to be done in the initial diagram, issue P1 dated July 27, 1972, sheet P1. This drawing was issued - three copies to Mr. Paul Kelly and one copy to Mr. Don Templin for preliminary review. After Mr. Kelly has evaluated the preliminary plan of action, we will arrange another meeting to continue our work and prepare any revisions to sheet P1 that may be necessary. Copies of monitoring reports will be sent with the original to Mr. Kelly, who will distribute to his sub contractors as he feels appropriate, one copy to Mr. Don Templin and one copy to Mr. Jim Mickelsen who is heading the project for Oakland Community College.

Ralph J. Stephenson, P.E.

RJS/m

To: Mr. Paul Kelly
Mr. Don Templin
Mr. Jim Mickelsen

RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER
September 23, 1972

Subject: Monitoring Report #2
Oakland Community College, Highland Lakes Campus
Mechanical and Electrical Renovation Work

Project: 72:42

Monitored on September 21, 1972 (working day 186)

Monitored from Issue #1 dated August 31, 1972

Target completion date: October 1, 1973 (working day 447)

Actions taken:

- Inspected renovation areas
- Reviewed job progress with Mr. J. Mickelsen
- Participated in construction conference

General Summary

The preliminary network diagram, Issue P1, as revised by Mr. Paul Kelly has been drafted and a preliminary computer run prepared. Some minor changes were made to this network at the construction conference. These changes will be incorporated into the computer printout, a new run made and the material distributed to Oakland Community College, the contractor and the engineer. The monitoring at this session was in accordance with the latest diagram.

As of September 21, 1972 (working day 186) major work on the project has not as yet started. This point was made in the construction conference and it was emphasized that the time schedule has now become extremely critical. As determined in our original diagramming session, it is going to be important to accomplish a sizable amount of work this year and early next year so that the contractors can make optimum use of their resources.

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Tasks that currently lag late start dates are as follows:

<u>Task</u>	<u>Projected Lag</u>
- Submit shop drawings	26 working days
- Install gas piping D Unit - C Unit	34 working days
- Install gas piping D Unit - C Unit	12 working days
- Install hangers and high temperature piping in tunnel from B to D	24 working days

It should also be noted that our plan of work originally contemplated activation of the C Unit boiler utilizing gas ~~main~~. This target now appears, according to Mr. Kelly, to be about 12 working days from today or on October 9, 1972 (working day 198). There presently is 1500 to 1600 gallons of oil remaining in the C Unit fuel tank. It will be urgent that the C Unit boiler be converted to gas before it becomes necessary to order more fuel. Therefore, conversion work should proceed immediately. Mr. Kelly said it would.

~~As such, we scheduled all openings, boxes and temporary weather covers to be complete in the D Unit on October 10, 1972 (working day 200). This date cannot be extended much further into cool weather without causing severe inconvenience. Therefore, efforts must be made to get this work underway immediately. Again, Mr. Kelly said he would discuss this with his sub contractors immediately.~~

All shop drawings have now been given to Migdal, Lane and Sachs. Mr. Mocerri said they would begin checking these immediately. It might be possible to get some of the early required shop drawings as early as next Tuesday, September 26, 1972 (working day 189). Those needed are

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for the heat exchanger pumps and trim which are due to be set and connected by mid-December of 1972.

~~_____~~ This has been traditionally a difficult delivery element and should be watched carefully.

In review, the project currently lags by from 12 - 34 working days, primarily in installation of piping in the tunnel, conversion of the C Unit boiler to gas, and demolition work for new unit ventilators in the D Building. Mr. Kelly promised the job would be manned immediately and it is expected the work tempo will pick up at the beginning of next week, September 25, 1972. It was decided at the meeting that the network plan and the printout should be distributed two copies to Mr. Jim Mickelsen, two copies to Migdal, Lane and Sachs and five copies to Mr. Kelly at Steve Kruchko Company. These shall be issued in the near future.

Ralph J. Stephenson, P. E.

RJS/m

To: Mr. Paul Kelly
Mr. Don Templin
Mr. Jim Mickelsen

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October 20, 1972

Subject: Monitoring Report #3

Oakland Community College, Highland Lakes Campus

Mechanical and electrical renovation work

Project: 72:42

Monitored on October 19, 1972 (working day 206)

Monitored from Issue 1 dated August 31, 1972

Target completion date: October 1, 1973 (working day 447)

Actions taken:

- Inspected renovation areas
- Reviewed job progress with Mr. Frank Kemezis
- Participated in construction conference
- Color coded networks

General Summary

As of October 19, 1972 (working day 206) the conversion of the boiler in the Union Building has been completed and startup of the system was to be made today, October 19th. All shop drawings except for controls have been submitted and returned. The contractor is starting hanger work in the tunnel between buildings B and D and architectural demolition in Building D is to start sometime within the next week. Locations for holes to be made in the exterior walls of the D Unit have been spotted by the demolition contractor.

Reviewing those tasks currently past late start/late finish dates, we find that one of the most critical is installation of piping work in the tunnel from B to D. Hangers were due to start on September 5, 1972 (working day 174). They actually were started this week on or about October 18, 1972 (working day 205) which gives them a lag of 31 working days. This is a critical situation and Mr. Kelly said they will make every effort to pick up time in this area.

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Breaking openings in the D Building was due to begin on the first floor August 7, 1972 (working day 154). They have not yet started, except for preliminary layout and thus, lag currently by about 52 working days. The major problem with breaking openings is that it is a noisy, dusty and disruptive process and requires evacuation of the area adjoining the work. Mr. Kelly said he would give Mr. Compton prior notice of when and where the demolition contractor is to work. I suggest that a carefully planned sequence schedule be worked out by the demolition contractor with the college and provided well in advance of start of work. This way appropriate shifts in classroom operation can be made early enough to avoid faculty difficulties.

In checking through shop drawing releases, it was established that most shop drawings have now been approved and returned. The major of these dealt with equipment and these approvals were in the contractor's hands by October 2, 1972 (working day 193). Equipment is now in fabrication according to latest information.

Mr. Kelly said he did not feel there would be any problem meeting presently anticipated delivery for new unit ventilators of January 31, 1973. Installation of these is due to start on February 1, 1973.

Since several major operations will be put into work within the next week or two, it was decided to schedule another progress meeting on Thursday, November 2, 1972. At this meeting I suggest the demolition contractor be present to help plan with the owner the detail sequence he is to follow. I further suggest that in mid or late December work progress be carefully re-evaluated and the network plan Issue #1 of August 31, 1972 be updated to reflect current job progress and future plan projection of the work.

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RJS/m

To: Mr. Paul Kelly
Mr. Don Templin
Mr. Jim Mickelsen

February 22, 1973

Subject: Monitoring Report #4
Oakland Community College, Highland Lakes Campus
Mechanical and electrical renovation work

Project: 72:42

Monitoring Date: February 20, 1973 (working day 291)

Monitored from Issue #1 dated August 31, 1972

Target Completion Date: October 1, 1973 (working day 447)

Actions taken:

- Inspected renovation area
- Participated in construction conference
- Evaluated job progress

General Summary

As of February 20, 1973 (working day 291) work progress in most major areas looks good. Piping work in the tunnel between the D and B buildings, as well as in the crawl spaces, is well along. Core drilling has been substantially completed in the B building and unit ventilators and fan coil units are on the job. At the second floor of the B building sheet metal ductwork above the ceiling has been put in work earlier than originally scheduled and is well along. Toilet room work at the second floor of the B building is substantially complete.

The heat exchanger, pumps and trim at the D building basement are on the job and now being set and piped. This work shows as lagging, however, we had restrained it with an agreed-upon end time restraint and actually the work is not presently holding up any other critical operations.

A major phasing pint of the job will be in late April or early May when the heating shutdown for summer occurs. This will allow operations concerned with changeover to be completed.

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Work in the 200 building, the student commons, will be started as soon as it can be sequenced with other work now in progress.

In the B building new unit ventilators and fan coils will be started as soon as possible. They were due for a late start of February 1, 1973 (working day 278) but the end restraint on them was placed so as to make them critical and get them into work.

The contractor feels that the present target date of October 1, 1973 is a very realistic goal and sees no problem in meeting it at the present time. There are some bulletin changes pending but it does not appear they will seriously delay any present or projected work. Overall the project has improved considerably since my last monitoring and if present progress is maintained, it appears that there should be no difficulty in meeting the scheduled end dates.

A brief discussion was held at the meeting as to the appropriateness of an updating. I recommended we maintain our present schedule as a yardstick since it still offers a valid sequencing and checklist guide for the total project. If at our next meeting it appears that an updating of the network would be useful and helpful, it can be accomplished at that point with little loss of control over the intervening period.

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To: Mr. Paul Kelly
Mr. Jim Mickelsen

April 18, 1973

Subject: Monitoring Report #5

Oakland Community College, Highland Lakes Campus

Mechanical and electrical renovation work

Project: 72:42

Monitored: April 16, 1973 (working day 330)

Monitored from Issue #1 dated August 31, 1972

Target Completion Date: October 1, 1973 (working day 447)

Actions taken:

- Inspected renovation area
- Participated in construction conference
- Reviewed job progress with contractor representatives
- Evaluated job progress

General Summary

As of April 16, 1973 (working day 330) work progress in most areas continues to move very well. Installation of unit ventilators and fan coil units in the D Unit is just getting underway. Renovation work at the second floor in D has been substantially completed and the work is now moving toward the heating season shutdown, tentatively scheduled for the middle of May.

In our planning work we had anticipated a May 15, 1973 (working day 351) shutdown of the heating season. This date may be altered slightly depending upon the requirements of weather and temperature. However, when the shutdown occurs, then remaining work phases can be engaged upon.

Reviewing tasks to be started, continued or completed over the next month and reading directly from the late start/late finish sequences, we find the following:

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- Start piping mains and drops in building 200. This work was due to start on March 1, 1973 (working day 298) but the mechanical contractor feels he would prefer to start at the heating shutdown point on May 15th and at that time will remove existing heating equipment, along with installation of piping and drops. We had some discussion about the matter and it does not appear presently there will be any major problem meeting our end date if both of these tasks start concurrently on May 15th.
- Remove existing heating equipment
- Continue installing unit ventilators and fan coil units in Building D
- Disconnect and remove boiler room piping in Building B
- Disconnect and remove condensate pumps in Building B

At the meeting we reviewed possible delays to the project and the owner and the architect/engineer along with the contractor agreed there were no pending changes or revisions likely to be made that would delay on the job.

It was recommended that our next meeting be held subsequent to the May 15th date so as to evaluate general progress following the shutdown of the plant. At this time we shall be better able to evaluate the major share of work which must follow the shutdown.

In summary, the project continues to move quite well. Of some concern is installation of piping and drops in Building 200 which now is planned to start on May 15, 1973. The contractor, however, sees no problem with this work in completing by the scheduled date of October 1, 1973.

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To: Mr. Paul Kelly
Mr. Jim Mickelsen