

January 2, 1975

Subject: Monitoring Report #1
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: December 23, 1974 (working day 250, 1974/75 working day calendar)

Actions taken:

- Reviewed overall job sequencing
- Prepared preliminary network model, Issue P1 dated December 23, 1974

General Summary

This meeting was primarily to review early job sequencing and establish critical delivery items. Major attention was focused on developing the foundation sequence for the main building, section D and its interrelationship with the natatorium. An early evaluation of the swimming pool area shows it is a very complex excavation and concrete foundation project. The area is also critical to continuous structural steel erection. Another element that is important relative to this foundation work is installation of bleachers at the pool area. Mr. Conrad and Mr. Koster will review the construction sequencing of the foundation work and we should spend some time at our next diagramming session preparing a detail action plan of this operation.

It appears now that structural steel will be on the project sometime in early or mid-July. Therefore, every effort at this time should be exerted toward getting foundations ready for uninterrupted erection of steel.

We also reviewed the early delivery items needed and indicated these on sheet P1 of the preliminary network model. This sheet has been distributed to Mr. Conrad, Mr. Stein and Mr. McKinstry. A list of the critical early delivery items is as follows:

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- foundation resteel
- deck resteel
- column and wall resteel
- pool slab and wall resteel
- miscellaneous iron
- anchor bolts
- sip rib roof panels
- bleacher precast seats
- stair handrail details (for casting of precast stairs)
- hardware schedule
- hollow metal frames
- elevator build-ins
- pool scum gutter and inlets
- underwater vision windows
- underwater pool lights
- special plumbing fittings

It would be wise to obtain an early and authentic handle on all of these delivery items since each requires shop drawings and approvals. The construction program is going to be a very tight plan of work to meet and will require the utmost in cooperation and expediting on all parties' parts to achieve. Therefore, I recommend that everything possible be done to expedite submission, review and approval of shop drawings, particularly those required for early items as listed above.

It is the intent of the general contractor to begin excavation work on January 2, 1975 (working day 1, using 1975/76 working day calendar). The first operation will be to remove the hill at the southwest corner of the site down to approximately 832'. At this point foundation work will begin at the southwest corner of the building and it is possible that a concurrent operation on the pool area will be maintained. This matter will be reviewed in detail by the Christman Company.

I shall plan to be back in touch with Mr Conrad in the very near future to set a date for continuation of our diagramming. However, adequate time should be allowed so that additional thinking about sequence is possible and also so that more information about shop drawings and deliveries on the above items can be obtained.

Ralph J. Stephenson, P. E.

RJS/m

To: Mr Al Conrad
Mr. D. S. Budzynski
Mr. W. Knapp
Mr. T. Stein
Mr. D. McKinstry

January 17, 1975

Subject: Monitoring Report (2)

Lansing Community College PE Building

Lansing, Michigan

Project: 74:87

Date of monitoring: January 13, 1975 (working day &
1975/76 working day calendar)

Actions taken:

- continued foundation work plan sequencing
- participated in construction conference
- Briefly inspected project site

General Summary

At this planning meeting with the general contractor we continued planning foundation work for the job, reviewing the sequencing necessary to obtain early concrete decks for steel erection. We also reviewed with major subcontractors the need for early delivery on imbedded items, particularly those at the pool including underwater lights, soom gutter drains, pool inlets and special cast plumbing fittings. Also emphasized was the need for expediting vision windows furnished by the general contractor.

As we prepared our plan of work it evolved that the pool service area (PSA) and the pool proper are very critical pivot points of the project. It appears that it will be essential to have the supported decks at the pool service area as well as the building supported deck above poured out to receive early structural steel. Our planning pointed up the critical nature of proceeding at both the D area and the pool service and pool area concurrently.

The present intent is to make the main building D pour at the first supported concrete deck level in four sections. This must be dovetailed closely to the construction of the pool service area supported decks, particularly over the basement

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area added by the alternate. As we completed our diagramming for the day, it was felt that further study was critical to proper sequencing of the project. Mr. Conrad and Mr. Koster will review sheets P1 and P2 of the network, issue P2 dated January 13, 1975 to evaluate the sequences needed to accept steel in mid-July.

The project appears to be a very tight job for time and care must be taken to give close and continuous expediting attention to all delivery and material items. Also, it will be essential to clear away all early administrative delays to the project, such as may be encountered in obtaining ESO approval or other such required actions. Presently there is some difficulty on this ESO requirement and it is urgent that clearing it becomes a top priority.

At the site, work has moved well in clearing off the hill and rough grading the southwest corner. It is expected to start exterior column and wall footings at the D area by January 16, 1975 (working day 11) and to concurrently construct the interior column and wall footings at the D area. Mass excavation for the pool service area is presently scheduled to start on February 3, 1975 (working day 23). It is possible that this work will begin earlier if at all feasible. Mr. Koster is presently evaluating the matter.

With respect to deliveries, early footing column and wall resteel is on the job and shop drawings for several critical items are in work or submitted. A brief review of the status of each follows:

- | | |
|---------------------------------|---------------------------------------|
| - Early foundation resteel | on job |
| - Early deck resteel | presently being detailed |
| - Early column and wall resteel | on job |
| - Pool slab and wall resteel | no report |
| - Miscellaneous iron | being detailed |
| - Anchor bolts | presently being detailed and approved |

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

- Zip rib roof panels	shop drawings approved, fabrication started
- Bleacher precast seats	no shop drawings as yet
- Stair handrail details (for casting precast stairs)	shop drawings in work
- Hardware schedule	submitted and approved
- Hollow metal frames	no report
- Elevator build-ins	no report
- Pool scum gutter and inlets	shop drawings not yet in
- Underwater vision windows	shop drawings not yet in
- Underwater pool lights	order placed - no word as yet on delivery
- Special plumbing fittings	some detailing started

Again, I urge that every effort be made to expedite to the greatest extent possible the above and other early items that are required for concrete work.

In summary, the project is currently in work in the field and active detailing and ordering of materials and equipment is well underway. Our evaluation of the plan shows that the pool service area and pool are critical elements to getting the main supported decks ready for structural steel in mid-July. The general contractor is currently evaluating the sequence of work. We will continue our detailed planning at our next diagramming session. I shall be in touch with Mr. Conrad regarding the date.

Ralph J. Stephenson, P.E.

RJS/m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

February 12, 1975

Subject: Monitoring Report #3

Lansing Community College PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: February 10, 1975 (working day 28)

Actions taken:

- Continued diagramming substructure and superstructure work
- Participated in construction conference
- Briefly inspected project site

General Summary

As of February 10, 1975 (working day 28) exterior column and wall footings, along with exterior walls and piers, are in work at the west wall of Building D. Interior column and wall footings are also in work in D. Mass excavation has begun at the pool service area (PSA) and it is expected to begin perimeter wall footings at the pool service area almost immediately.

Generally work is meeting dates between early and late start targets. The D building work is about 7 working days behind early starts and early finishes, in part due to a hold placed on column line 23 for revisions to accommodate a future parking deck. This hold is being released almost immediately and work should resume again there soon.

During the construction meeting we reviewed the delivery status of early items and a summary is given below.

- | | | |
|--------------------------|---|---|
| - Early deck resteel | - | shop drawings have been approved and fabrication is in work |
| - Bleacher precast seats | - | shop drawings have been approved |

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CONSULTING ENGINEER**

- Hardware - in fabrication
- Early hollow metal frames - in fabrication
- Anchor bolts and leveling plates - to be delivered February 10, 1975 (working day 28)
- Vision window shop drawings - not yet submitted. This item should be watched.
- Under water lights - shop drawings have been approved
- Zip rib roof - shop drawings have been approved and material should be in fabrication.

Note: There may be some EPA problems with the fabricating plant. An immediate check should be made to insure that fabrication of the panels occurs before any potential plant difficulties occur.

- Early miscellaneous iron - shop drawings still being prepared
- Stair D5 handrail shop drawings - have been completed adequate for preparation of precast stair D5 shop drawings
- Precast stair shop drawings - submitted
- Elevator shop drawings - basic elevator shop drawings have been approved. Still to be submitted are dimensional drawings.
- Scum gutter drains and pool inlets - shop drawings not yet submitted
- Special early plumbing fittings - some shop drawings have been submitted and approved
- Structural steel - delivery presently scheduled in nine units to start on July 14, 1975 (working day 136) and delivery to be complete on or about August 25, 1975 (working day 166)

As part of our diagramming work Mr. Conrad, Mr. Koster and I completed the sequencing of floor pours and also planned the construction of the pool walls, bottom and slab on grade at the PSA lower area.

Generally major supported deck pours break into six separate areas.

- Pour #1 - column line 6 - 18 and MN to K at elevation 832'
- Pour #2 - column line 4 - 18 and C to G. 5 at elevation 848'
- Pour #3 - column line 4 - 18 and G. 5 to K at elevation 848'
- Pour #4 - column line 4 - 18 and K to MN at elevation 848'
- Pour #5 - column line 1 - 4 and C to M at elevation 848'
- Pour #6 - column line 6 - 21 and MN to V at elevation 832'

There are other miscellaneous supported concrete decks but the above are the major critical pour areas. Structural concrete decks to be cast on structural steel framing will be defined in detail in later diagramming.

During our planning conference Mr. Neal Strickland of Haven Busch met with us and reviewed the sequence of steel erection. It is intended to deliver Unit 1 structural steel on July 14, 1975 (working day 136) and to follow sequentially with remaining units up through 9 with erection following in the sequence as shown on the site location and erection sequence drawing by Haven Busch dated December 19, 1974, revised as of February 7, 1975. This drawing was distributed at our planning session.

Durations to place the steel were given, along with durations for plumbing and bolting, erection of deck and installation of studs. We shall tie these into the diagram at our next planning session. Overall, it appears presently that our floor pour sequence will complete the required supported decks in adequate time to be ready for structural steel. However, it is to be emphasized that work at the pool area as it relates to pour #1 particularly is very critical. This since some of the early steel erection depends upon decks that must be constructed in the early sequences. The pour sequence was reviewed with all parties concerned at the construction meeting. Information from our planning session is shown on Issue P3, sheets 1 and 2, dated February 10, 1975. These have been distributed to Mr. Conrad for his use.

At the construction meeting we reviewed the current status of the work. There seems to be considerable problem with EEO contractor approval and I urge that all activities that can be accomplished to get these approvals in hand be done immediately. Lack of approvals will slow work and make

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progress uncertain. It also tends to deteriorate contractor morale on the project and therefore, is critical to effective continuing work.

There was considerable discussion about the interaction of the PE Building with the parking deck at the north and also with work by Michigan Bell Telephone at the west. The parking deck is planned to start in the field sometime in July or August. It will be important that adequate working space be maintained around the south end of the deck at the north end of the PE Building so that contractors are not hampered in their activities. In addition, Michigan Bell work in Washington Avenue at the west side of the project should be deferred until excavation can proceed on the earth bank without danger of cave in. There is also a need to maintain room around the building for masonry scaffolding.

Considerable discussion occurred about the access to the electrical equipment room for switchgear. This switchgear is in the general vicinity of pour #6. It was decided to prepare shop drawings for the switchgear based upon current revisions being considered. This to allow dimensions to be obtained officially to determine access requirements for the gear.

In summary, the project is currently moving fairly well in the field although the hold at the north end should be removed as soon as possible. In addition, Bulletin #2 should be expedited. Presently deliveries seem to be in line. I shall plan to meet for additional planning on the project Monday morning, February 24, 1975 with Mr. Conrad and Mr. Koster. At that time we will try to diagram up through close-in.

Ralph J. Stephenson, P.E.

RJS/m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

March 3, 1975

Subject: Monitoring Report #4
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: February 24, 1975 (working day 38)

Actions taken:

- Continued diagramming substructure and superstructure
- Participated in construction conference
- Evaluated job progress

General Summary

As of February 24, 1975 (working day 38) wall footings at the ^{west} ~~east~~ side of D are about 60% complete with walls and piers just starting up. It is expected to make a first pour on exterior walls today with a second pour to follow sometime later this week. The lag on footings is about 8 working days and on exterior walls and piers about 9 working days over early start/early finish dates. Interior column footings and columns have been started at the D Unit and currently lag from 5 to 10 working days over early start/early finish dates.

It should be pointed out that the D area has a small amount of float time available and therefore, these lags are not so great measured against the late starts and late finishes. However, at this early point in the job it is always best to measure against early starts and finishes.

At the pool service area, perimeter wall footings lag by about 4 working days, excavation by about 5 working days and interior column footings about 8 working days over early start/early finish dates. This is a critical section of the building and the lags reported there are probably a true reflection of the lag over our anticipated work pattern. At the pool, work is meeting early start/early finish dates. However, early

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**RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER**

excavation has turned up trash, debris and some oil smell in the sub-soil. An evaluation of this soil condition is now being made and a resolution should be given sometime in the very near future. If a deeper excavation than presently required must be made, it is possible that some time will be lost at this area.

Overall, I estimate that the current lag over early start/early finish dates ranges from 5 to 9 working days.

Relative to deliveries, most items are in fairly good condition. However, I recommend that we expedite the vision windows, check into the manufacture of the sip rib decking and particularly expedite the scum gutter, pool inlet and the plumbing fittings for the pool bottom. The mechanical contractor is experiencing some difficulty obtaining the plumbing fittings for the pool drains and presently there is a longer than desired lead time required. The matter is presently under consideration.

As part of our planning work at this session, we re-evaluated the current issue P3 diagrams dated February 10, 1975, sheets P1 and P2. We added pour #7 from column lines 1 through 6 and column lines MN to V at elevation 848' to the sheet. As we restudied the various pours, it appeared that a benefit might be gained by constructing the slab on grade under pour #2 as early as possible so as to have it available for shoring the two way first floor deck. In order to do this, it will be necessary that the owner establish the function of the space and that the underground utilities to go under the floor slab on grade be issued to the field. Next, the floor slab on grade will be cast and at that point after proper curing, will be available for shoring. If this floor slab on grade can be poured early, it will allow backfilling of the Washington Street west elevation to proceed immediately upon casting the first floor deck at pour #2. I strongly suggest that careful consideration be given this matter since there are some distinct advantages both from a construction standpoint and from a backfilling standpoint. The structural steel erector will need good access from the west and early backfilling can insure he will have uninterrupted access from this side for erection of all phases of the structural steel.

Presently it appears that if this course of action is to be followed, we will need underground information at the pour #2 area at the slab on grade no later than February 28, 1975 (working day 42). This matter is to be taken under immediate advisement by the owner and the architect. As a part of this work, we also diagrammed the

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**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

structural steel erection sequence, along with metal deck installation. This information is shown on sheet P3, Issue P4 dated February 24, 1975. Copies of these drawings are being distributed to Mr. McKinstry, the Warren Holmes Office and Mr. Conrad for field use. I shall be in touch with Mr. Conrad or Mr. Koster in the very near future to arrange for our next diagramming session.

Ralph J. Stephenson, P. E.

**RJS
m**

**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry**

March 15, 1975

Subject: Monitoring Report #5
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: March 10, 1975 (working day 48)

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated job progress

General Summary

As of March 10, 1975 (working day 48) exterior wall footings at the east side of the D Unit have been completed, with interior wall footings to be poured out later as space becomes available. Column footings are almost complete in the B Unit.

Exterior walls in D are moving well and substantially poured from the south up almost to column line 19. Generally the lag in D over early start/early finish dates is about 4 to 7 working days on exterior walls and piers and about 13 working days on columns. However, they are substantially ahead of late start and finish dates and should pose no major problem to the job progress.

At the meeting the matter of pouring the floor slab on grade in the D Unit at the west side of the building was discussed. It was decided that we would not put a restraint from the floor slab on grade to the beginning of forming for the deck at pour #2 which is column line 4 - 18 and C - G5 at elevation 848'.

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This removes some of the problems that had been of concern due to frozen sub-base and getting underground utility work in at that area as quickly as possible.

At the pool service area, perimeter walls are just starting with some being poured at the south end. Several interior columns have been poured up to the underside of pour #1 at approximate elevation 832' and most excavation there is complete. Lags over early start and early finish dates at the pool service area are about 3 working days on perimeter walls and about 11 working days on perimeter wall footings. The 3 working day lag on perimeter walls is also a lag over late starts and late finishes. This is a critical and complex area and should be concentrated on to the greatest possible extent.

At the pool mass excavation lags early finishes by approximately 7 working days. However, as at the D Building, there is no lag over late starts and finishes.

Reviewing delivery items, Mr. Koster and I went over several critical elements on the job.

Zip Rib Deck

Fabrication status is still in doubt and again, because of the potential problem surrounding its manufacture, I strongly suggest a careful check be made immediately. Mr. Koster said that he would have something definite on the current status of the deck fabrication by next meeting.

Pool Fittings

The bottom floor drains and other miscellaneous gratings and drains at the pool and pool service area will all be on the job by the first week in April. Some pool fittings are on the job currently.

Vision Windows

Vision windows are not to be cast into the pool walls. Window spacers will be cast into which will be clamped the window frames. These spacers are available as needed.

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**RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER**

Underwater lights

Underwater lights are apparently in the Fox Electric shop and should cause no delays.

Precast Stairs and Bleachers

Form fabrication is just starting for these elements. There is no problem currently.

Elevator

Shaft shop drawings have just been submitted to the architect/engineer with a letter from the elevator manufacturer calling attention to some technical problems that do exist. These matters are being resolved presently.

Structural steel

A letter has been received by the general contractor from the steel fabricator saying that due to vacation shutdowns in July, steel delivery may be later than anticipated. Deliveries to today were projected at July 14, 1975 (working day 136), but a new delivery date has been projected in the week of July 28, 1975 (working day 146). Usually when a commitment for the week of is given it means the end of the week so we probably will have to project the requested start of structural steel erection about August 4, 1975 (working day 151), a delay of 15 working days, or three weeks.

This poses some very serious problems and should be clarified immediately. We have based much of the job planning upon the July 14, 1975 delivery date and a three week delivery delay will cause difficulties relative to floor slab pours, building close-in and very importantly, will affect adjoining construction operations on the proposed parking deck at the north end of the PE Building. This is a very serious matter and must be reviewed with the fabricator immediately. It is urgent that every effort be made to bring deliveries back to the originally committed target date of July 14, 1975 (working day 136). The general contractor will follow this immediately.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

In summary, the project is currently moving reasonably well and maintaining about the same lag over early starts and early finishes as it had at the last monitoring on February 24, 1975 (working day 38). The lag at the pool service area walls is critical and should be picked up as soon as possible.

Of most importance presently is to resolve the current structural steel delivery problem. The original delivery date was July 14, 1975 (working day 136). It now has slipped about three weeks or 15 working days to approximately August 4, 1975 (working day 151). This is a critical problem since it affects not only this building, but the adjoining parking deck which will be put into construction sometime in mid-summer.

The soil problem at the pool area has been resolved. Deliveries are also well under control and except for structural steel, the project is in fair condition.

Ralph J. Stephenson, P E.

RJS
m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

April 21, 1975

Subject: Monitoring Report #6

Lansing Community College PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: April 14, 1975 (working day 73)

Monitored from Issue P4 dated February 24, 1975

Actions taken:

- **Continued diagramming up through close-in with Mr. Conrad and Mr. Koster**
- **Participated in construction conference**
- **Evaluated job progress**

General Summary

As of April 14, 1975 (working day 73) supported decks are just getting underway at pour #1 (column lines 6 - 18 and M-N - K at approximate elevation 832') and forming will start about April 21, 1975 (working day 78) for pour #2 (approximate elevation 848', column lines 4 - 18 and C - G. 5)

Footings at the pool will start this week and presently are the largest lag item on the project, being approximately 13 working days behind the current Issue P4 network dated February 24, 1975. The lag in supported decks over late starts and late finishes is approximately 4 working days. It will be important to pick up most of this time since pouring of the decks and erection of structural steel is in direct sequence with the pool and supported deck construction. It was decided at the construction meeting to maintain the present structural steel schedule and to build the structure to receive structural steel on our current target date of July 14, 1975 (working day 136).

A review of delivery items shows the following.

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Zip Rib Deck

This material is reported to be presently in fabrication. It could be delivered in July provided safe storage room can be found to stockpile the deck.

Embedded Items at Pool

Mr. Koster reports that all pool area embedded items are on the job or available.

Precast Stairs and Bleachers

Fabrication is reported in progress. I recommend a constant check be made to insure that fabrication will be complete and on the job when structural steel for units 5, 6 and 7 is to be erected. Currently this erection date is set at August 1, 1975 (working day 150).

Elevator

There is still some discussion regarding supports for the elevator guide rails. This matter should be resolved as soon as possible to insure it does not delay structural steel.

Structural Steel

The original delivery date of July 14, 1975 (working day 136) for structural steel is now re-established. We are basing our planning on this date. It is to be re-emphasized that structural steel is very critical since it has a heavy influence on how work will proceed on the adjoining parking deck structure to the north.

Air Handling Unit

One other item that came up during the meeting was the delivery in April of air handling units. These are very large units and it will be desirable to find a storage place for them. The owner has promised to give consideration to various locations for storage potential.

* * * * *

As part of our diagramming, we brought the building up to complete close-in on sheets P4 and P5. The concrete pours on deck are numbered

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from 1 through 14 and generally proceed on the third floor from west to east at the gym and then at the 4th floor on the areas around the gymnasium, next moving to the second floor at the north end and then closing out at the third and fourth levels on the north.

Floor piers and roofing sequences are shown on sheet P4. Erection of exterior masonry, zip rib deck and siding, sash and glazing are shown on sheet P5. A detailed sequence of moves was planned for the masonry and this should be reviewed in detail for approval prior to start of masonry. Presently it appears that we will be able to close the building in completely starting from about October 1, 1975 (working day 192) on through to about January 2, 1976 (working day 256).

At our next planning session we should set a firm sequence for interior rough and finish work. It appears that we will be able to work in the locker room area of the gym building first, perhaps concurrently with work at the pool area. Pool exterior masonry could be complete on or about September 18, 1975 (working day 183) with a roof on the pool about November 24, 1975 (working day 230). Thus, it is possible we could move into the pool at an early date and initiate a sizable amount of rough and finish work there. As mentioned above, we should concentrate on the interior rough and finish sequence at our next meeting.

The project is a tight one as everyone is well aware and it will require careful expediting and continuous good supervision to bring it home by the target completion dates.

In summary, the project currently lags from 4 to 13 working days, primarily in supported decks and pool foundations. This lag has been incurred primarily because of heavy winter weather and access problems at the pool surface area. Structural steel is due on the job July 14, 1975 (working day 136) and will be kept as a target for all work up to that point.

Ralph J. Stephenson, P. E

RJS/m

To: Mr. Al Conrad
Mr. D S. Budzynski
Mr. H Knapp
Mr. T Stein
Mr D McKinstry

April 30, 1975

Subject: Monitoring Report #7

Lansing Community College PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: April 28, 1975 (working day 83)

Monitored from Issue P4 dated February 24, 1975

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Dick Baker, job superintendent
- Participated in construction conference
- Evaluated job progress

General Summary

As of April 28, 1975 (working day 83), a portion of pour #1 between column line 6 - 18 / M - K at approximate elevation 832' has been poured out. The remainder of this pour will be made as soon as the rain stops. This deck had a late pour date of May 8, 1975 (working day 91).

Pour #2 at column line 4 - 18 and C - G.5 at approximate elevation 848' is partially formed and pans are being set with in-floor work to start shortly. This work is presently just meeting late starts and late finishes. I suggest it be given careful attention. Pour #2 was due to be completed and poured out at an early finish of April 24, 1975 (working day 81) with a late finish of June 3, 1975 (working day 108). It should be pointed out that floor pours from 2 through 6 were planned to dovetail with each other with some concurrent action occurring.

Generally supported deck construction is meeting dates between early and late starts and finishes although it will be critical to keep these moving rapidly to achieve the goal of having pours 1 through 6 completed by the arrival of structural steel on the job.

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**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

It was again decided at this meeting to keep the structural steel delivery date of July 14, 1975 (working day 136) as a target delivery and start of erection.

Perimeter walls and piers at the pool service area are moving well and currently meeting dates between early and late starts and finishes. Construction of pool wall footings has just begun and presently lags by approximately 25 working days over late starts and late finishes. This is a considerable increase over the lag reported at the last monitoring on April 14, 1975. The reason this area is critical is that it restrains construction of pool walls and pool bottom. The pool walls and bottom, in turn, restrain backfilling and construction of the pool service area slab on grade. This, in turn, restrains construction of pour #6 since it was desired to form this pour off the slab on grade. In any event, it will be essential to have the pool walls constructed in order to form and pour #6; so as a result, this entire sequence becomes important to maintaining our current sequence and schedule of work.

It would be wise to review the pool area construction carefully over the next few days to insure adherence to the desired sequence.

Mr. Conrad pointed out during the meeting that it is the intent to have the building substantially closed in by January 2, 1976 (working day 256). It was also pointed out that probably close-in of the pool area could be accomplished earlier than that of the main building and therefore, it is planned to start rough interior work at the pool at an early date.

A review of delivery items shows the following:

Zip Rib Deck

Presently zip rib is still due in in July and two storage places are presently under consideration.

Precast Stairs and Bleachers

No information was available on these items at the meeting. I again recommend that a check be made to insure that their fabrication meshes properly with delivery and installation of structural steel.

Elevator Guide Rail Supports

Shop drawings have been approved and returned.

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Structural Steel

The original delivery date of July 14, 1975 (working day 136) is still holding. Again, this is a critical item since much of the work on this job as well as on the work to the north depends upon meeting this critical date.

Air Handling Units

Most major mechanical equipment will be on the job by July 1, 1975 (working day 128) or earlier. A storage place is now being located for stockpiling of the large air handling units.

* * * * *

As part of the meeting we briefly reviewed the mechanical and electrical items that might pose potential problems. The first of these was fire protection and it is presumed presently that approvals will be forthcoming in adequate time for the job to move without delay. I suggest constant attention be given fire protection approvals.

Pool equipment has been ordered and apparently is presently no major problem although detailed information was not available at the meeting.

I recommend a check be made on the status of temperature control system components to insure that they do not become a delay to the interior work once it begins.

There apparently are no major current problems on delivery of electrical items.

The mechanical mentioned that he would appreciate a review of some apparent conflicts in pool piping and this will be made.

There were also some questions about various details at the pool area proper and these will be reviewed and resolved in the very near future.

We set our next planning and review meeting for 8:30 A.M. Tuesday, May 27, 1975 at Mr. Coarad's office. At this meeting we plan to make a major review of the tentative schedule for the job on through to the end of the year and to continue diagramming interior work. This review and planning meeting will be an all day session, carrying through the afternoon. Our goal for the day is to complete as much of the interior sequencing as is possible.

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

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In summary, the project currently is moving relatively well in construction of supported decks and pool service area walls. However, there is an approximate 25 working day lag in construction of the pool wall footings which is serious since this sequence leads directly into the start of pour #6 which, in turn, is a strong influence on erection of structural steel. I recommend careful attention be given this area and any problems be resolved so that work there can move as rapidly as possible and recapture the current lag.

Ralph J. Stephenson, P. E.

RJB/m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

May 29, 1975

Subject: Monitoring Report #8
Lansing Community College PE Building
Lansing, Michigan

Project: 74187

Date of Monitoring: May 27, 1975 (working day 103)

Monitored from Issue P4 dated February 24, 1975 and P5 dated April 14, 1975

Actions taken:

- **Inspected project**
- **Reviewed project progress with major contractors**
- **Participated in construction conference**
- **Evaluated job progress**
- **Continued diagramming project**

General Summary

As of May 27, 1975 (working day 103) pour #1 at column line 6 - 18 / M-K at approximate elevation 832' has been substantially poured out. This pour is now being cured and stripped. Pour #2, which has been extended to include the entire area between column line 1 - 18 / C-G.5 at approximate elevation 848' has also been poured. Forming is now in work for pour #3 between column line 1 - 18 / G.5 - J.5 at approximate elevation 848'. The larger pour sizes will eliminate the need for pour #5 which was planned to extend from column line 1 - 4 / C - M at approximate elevation 848'. Thus, although the current pours lag early starts and early finishes, they have gained a few days by elimination of pour #5 and are presently within the late start/late finish range. It is expected to pour #3 about June 11, 1975 (working day 114) and #4 about June 18, 1975 (working day 119).

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Lansing Community College
PE Building, Lansing, Mich.
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Pool walls are well in work with the north half poured and partially stripped and the south half presently being formed. This work is critical to start of underground utilities at the pool bottom which are due to begin immediately. Construction of the pool bottom, backfilling of the pool walls and construction of the pool service area slab on grade are very desirable to complete prior to start of the construction of the deck over the pool service area. To be watched carefully is installation of mechanical equipment in the pool service area. Some of this equipment will be needed for heating the pool area during construction and arrangements will have to be made to get it in place without interfering with construction of the top deck. Attention should be given this matter at an early date.

Structural steel is still being held for delivery on July 14, 1975 (working day 136) with the sequence still as shown on sheet 3, Issue P4 dated February 24, 1975.

As part of our construction conference, a complete review was made of the close-in pattern for the project. A detailed explanation was reviewed with the major contractors and their general agreement was obtained that the close-in plan of work presently being followed is possible and will result in the building being totally closed to weather by January 2, 1976 (working day 256). This is to be maintained as our present goal. It is a critical target since it will be absolutely essential to obtain an early close-in to complete the building on the presently scheduled target date.

Part of our diagramming work concerned sequencing of early spray-on fire-proofing, mechanical, electrical and masonry interior rough work. It is the intent to start rough mechanical and electrical work at the south half of the first floor in the D Unit (S/2 D1). This work can begin along with erection of interior masonry about August 13, 1975 (working day 158) and will move from the south half of the D first floor to the natatorium locker room (NL) area at the first floor in the E Unit. Rough mechanical and electrical work will move from the locker room area to the pool service area (PSA) so as to complete all rough mechanical/electrical work in the locker room and pool proper before moving back into the main building.

Interior masonry at the locker room and pool (NL & NP) will proceed concurrently so the entire pool area will be ready for waterproofing and ceramic tile whenever the building is substantially in the dry. From the pool area, interior rough mechanical and electrical work, along with masonry, will next start at the second floor of the D Unit (D2). From D2 it proceeds to the north

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Lansing Community College
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half of the D building first floor (N/2 D1). This work was held until erection of structural steel, construction of the floor slab on grade and spray-on fireproofing were complete.

Following work at the first floor, mechanical and electrical installation will start as early as possible at the third and fourth floors of the D Unit (D3 and D4).

We prepared a preliminary diagram for installation of masonry, sheet metal ductwork, mechanical piping including sprinkler piping and rough electrical conduit and feeders for each of the major areas of the building. In addition, we prepared a diagram for the slab on grade and spray-on fireproofing. These preliminary networks will be drafted into final form showing the sequencing of this work only. This is a slightly different procedure than normally followed where each floor is shown complete, including masonry and rough mechanical and electrical work. However, in order to issue an interim plan of work showing the planned sequencing of the rough mechanical, electrical and masonry items, the diagram will be prepared as noted above.

In summary, the project is currently moving reasonably well and meeting major target dates between early and late starts and finishes. However, it will still be very tight to meet the July 14, 1975 (working day 136) delivery date for structural steel with concrete deck. However, if weather continues good and the job moves as at present, this goal can be met.

General sequencing of the rough architectural, mechanical and electrical installation indicates that work will move from the first floor south of the D Unit to E Unit to the pool service area, then to the second floor of the D Unit, next back to the north first floor of the D Unit, then up to floors 3 and 4 of D. This sequence will be reviewed by all concerned to determine its acceptability.

Ralph J. Stephenson, P. E.

RJS
m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

June 11, 1975

Subject: Monitoring Report #9

**Lansing Community College PE Building
Lansing, Michigan**

Project: 74:87

Date of Monitoring: June 9, 1975 (working day 112)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated job progress

General Summary

As of June 9, 1975 (working day 112) forming and in-floor work for pour #3 (column line 1 to 18 / G.5 to J at elevation 848') is almost complete and this pour will be made on June 10 or 11 (working day 113 or 114). This will keep that pour on schedule with early start/early finish dates. Pour #4 is partially formed and is expected to be poured out sometime within the next week and a half. Mr. Baker expects to construct the slab on grade at the pool service tunnel prior to forming pour #6 which is the deck over the pool service area at elevation 832'. Presently it appears that all of this work will be completed in good shape for start of erection of structural steel on July 14, 1975 (working day 136).

Fabrication of precast bleachers is on schedule and they will be delivered in time to be erected with structural steel. It should be noted again that erection of bleachers is currently scheduled to begin on August 1, 1975 (working day 150).

At the construction meeting the mechanical contractor said that all fire protection drawings have now been filed with the appropriate agencies. This approval process should be followed carefully so that no holdups in subsequent fabrication and delivery of

fire protection materials is encountered.

There is some difficulty still with setting pool filtration equipment and heating equipment at the pool service tunnel. Presently heating equipment for the pool tunnel will be on the job June 23, 1975 (working day 122). An access opening will be left at the southwest corner of the tunnel and it is expected that the equipment be dropped in and moved from there. Temporary heat for the pool this winter depends upon getting equipment and ductwork in the pool tunnel in place. Therefore, the pool service area, pool tunnel and equipment in the tunnel are critical for temporary winter heat.

As part of our review of the close-in items, we discussed the storage of sip rib deck. This deck apparently could be shipped to the job almost any time and it was recommended at the meeting that storage area arrangements be worked out as soon as possible.

There is presently some difficulty with strikes in the Lansing area. Lathers and floor coverers are on strike presently, having gone out about June 2, 1975 (working day 107). It is possible that insulators and reefers will go out on strike June 30, 1975 (working day 127). At present strikes are not hurting the job.

After the construction meeting I issued sheets 2, 3, 4, 5, 6 and 7. Issue P6 dated May 27, 1975. These sheets are for the structural frame of the building, close-in, spray-on fireproofing, slabs on grade, interior masonry, interior rough mechanical and electrical work and pool ceramic work. A complete review of the diagram was made with all of the major contractors and they were asked to provide any comments or revisions they felt should be made to me within the next two weeks. If there are no revisions or changes, I shall proceed to computer process the current diagram and issue it as the official monitoring document.

Generally the work sequence as discussed on May 27, 1975 (working day 103) in our diagramming session was acceptable. Basically the work moves from the D Unit first floor south half to the natatorium and from the natatorium to the Building D second floor. From the second floor it proceeds to the first floor north half of the D Unit and then to the third floor of the D Unit. Concurrently with the D Unit third floor, work will proceed at the fourth floor of the D Unit.

Of critical importance over the next few months is to maintain erection of the structural steel frame and floor pour sequences, along with the exterior masonry close-in as has been planned.

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**RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER**

In summary, the project continues to move well with concrete work being readied for erection of structural steel. Presently it appears that all concrete supporting work for structural steel will be available in time to receive the structural steel frame.

Ralph J. Stephenson, P.E.

RJS

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**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry**

June 25, 1975

Subject: Monitoring Report #10

Lansing Community College FE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: June 23, 1975 (working day 122)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated job progress

General Summary

As of June 23, 1975 (working day 122) the project is currently meeting all major late start/late finish target dates. Pour #3 (column line 1 - 18/ G.5 - J at elevation 848') has been completed and pour #4 (column line 1 - 18/ J - MN at elevation 848') will be poured on Wednesday, June 25, 1975 (working day 124). Pour #6, the deck over the pool service area has been poured. If present plans hold, all concrete will be in place and ready for erection of structural steel still scheduled to start on July 14, 1975 (working day 136). At the pool the pool walls have been stripped and the slab on grade at the pool service area and tunnel are in work presently. The deck over the pool service tunnel will be formed and poured as soon as the slab on grade is complete.

Underground utility work at the D Unit north half ground floor is just getting underway and is about 9 working days behind early start/early finish dates. However, this operation has float time available.

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**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

We once again reviewed the logic shown on sheets 2 through 7, Issue P6 dated May 27, 1975. No revisions were indicated to these sheets by the contractors. Therefore, I shall proceed to process Issue P6 into final form for issue. This material will be computerized and the networks calendar dated with early and late starts and finishes.

In respect to major deliveries to the job, all heating equipment is on the site and pool filtration equipment is due now on August 15, 1975 (working day 160). There will be some minor difficulty setting this filtration equipment. However, the conflict has been resolved and access is to be provided by the general contractor. Most other deliveries presently are holding at the required target dates.

The lathers and soft tile workers are currently still on strike. It is expected insulators will go on strike next week and that the roofers/waterproofers will probably go out on July 1, 1975 (working day 128). Presently these trades are not seriously affecting the job although some waterproofing may be delayed by a walkout of the roofers.

A matter discussed in some detail at the construction meeting was the potential interference problems with the very large number of projects going on at the same time. These include:

- completion of the vocational/technical building**
- construction of the parking deck**
- erection of structural steel at the PE Building**
- construction of mall areas surrounding the various buildings**

It will be important to maintain constant contact with all affected agencies to insure that interferences are kept to an absolute minimum.

Another matter discussed at the meeting was the availability of the access drive off Grant Avenue by September 15, 1975 (working day 180). The drainage system and paving of the wearing course is apparently to be done by the PE Building contractor. Since some of the drainage system components are long lead time items, there is a potential problem of getting this drive into full service with the drainage system operating. The matter will be discussed and reviewed in more detail at the next construction meeting.

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

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Lansing Community College
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In summary, the project currently is moving well with all major tasks meeting targets between early and late starts and finishes.

Ralph J. Stephenson, P.E.

RJS
m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

July 23, 1975

Subject: Monitoring Report #11
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: July 21, 1975 (working day 141)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- Inspected project
- Distributed dated copies of Issue P6 with computer run
- Evaluated job progress

General Summary

As of July 21, 1975 (working day 141) most major supported deck concrete pours with the exception of those on structural steel have been completed. The service area deck is presently being poured out and should be finished shortly.

Structural steel arrived on the job July 15, 1975 (working day 137) and units 1, 2 and 3 are well along in erection. Unit 4 is due on the job this week and should be erected on schedule.

The only two items showing signs of lag are the pool bottom and the slab on grade at the ground floor of the D Unit. Neither, however, is restraining any critical tasks and their lags are not serious.

During the monitoring session I distributed the dated networks and computer printouts to all parties concerned. I also prepared the project analysis report and will have this run as a project work status sheet. This will be processed and mailed soon.

Ralph J. Stephenson, P.E.

RJS/m

To: Messrs. Conrad, Budzynski, Knapp, Stein
and McKinstry

August 14, 1975

Subject: Monitoring Report #12
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: August 11, 1975 (working day 156)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- **Inspected project**
- **Participated in construction conference**
- **Evaluated job progress**
- **Prepared work sheet for project status report**

General Summary

As of August 11, 1975 (working day 156) structural steel in Units 1, 2, 3 and 4 (D Unit at south) is substantially erected, plumbed and is presently being trimmed out. Some metal deck has been erected at the roof level but most will be held until trimming is complete.

Structural steel and erection of precast bleachers in sections 5, 6 and 7 are underway. It currently is having some difficulty with precast erection. However, most precast has arrived on the job, erection problems are being ironed out and the contractor expects that most of the bleachers and section 5, 6 and 7 steel will be erected on the target of the evening of August 14, 1975 (working day 160).

Erection of structural steel in the north unit (8 and 9) will begin sometime between its early start of August 15, 1975 (working day 160) and its late start, August 22, 1975 (working day 165).

Floor slabs on grade in the D Unit are poured out in the south half and the total operation there met its early start/early finish date. It is expected exterior masonry will begin at the pool area as quickly as structural steel at the pool is erected and trimmed out. Masonry generally will move from south to west and then to the north in the pool area. Mean-

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while, masonry will be started at the lower level of the D Unit in the south half and along with other interior work will generally move in a counter-clockwise direction and upwards as the various units of the building are erected and working surfaces are available.

Supported decks are due to begin on structural steel August 27, 1975 (working day 168). Pour #1 is the western most section of the deck at elevation 863'.

Overall, the project is currently meeting all major targets between early and late starts and finishes.

During the construction meeting it was pointed out that the roofers have settled their strike but that pipe coverers are still out. They went on strike July 1, 1975 (working day 128) and present information indicates they will be back no earlier than between September 2, 1975 (working day 171) and September 15, 1975 (working day 180). Although this strike does not currently have a major impact upon the work, as soon as masonry starts it will be a delaying item on insulation of pipe work in walls.

It was emphasized by the owner at the meeting that a decision on the unassigned areas in the D Unit and on the laundry room will probably not be made in the near future, in fact, probably on the unassigned areas not until late in the fall. Therefore, all work is presently proceeding in these unassigned areas as shown on the current working drawings and specifications. Mr. Koster mentioned that hollow metal frames are currently due on the job August 25, 1975 (working day 166). Prior to that some masonry work will be done wherever possible in areas not requiring frames. Major masonry areas requiring frames will begin on August 25, 1975 (working day 166).

The pool filtration equipment which must be set through the stairwell at the pool tunnel is still due to arrive on the job August 15, 1975 (working day 160).

In summary, the project is still moving very well with erection of the structure generally meeting targets between early and late starts and finishes. Contractors are still aiming at a total close-in of the building by the end of the year or sooner. This will be a critical date since there is considerable interior finish work to be done. It is expected interior work at the pool will begin first and heavy efforts must be put on work early at the major locker rooms since these are the key areas of the entire facility.

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

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Setting the large fan units at the mechanical equipment room in the D Unit is still a problem that is being worked upon. It should be kept in mind that access at the north will be difficult as the parking ramp proceeds. Therefore, any major access to the building required from the north end must be earlier than the date upon which masonry is scheduled to start up at the north end which is presently on or about October 7, 1975 (working day 196). This masonry must proceed promptly due to the need to clear the area for adjoining construction.

I have issued the project status report resulting from this monitoring session to all concerned.

Ralph J. Stephenson, P. E.

RJS
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To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

August 28, 1975

Subject: Monitoring Report #13
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: August 25, 1975 (working day 166)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated job progress
- Prepared work sheet for project status report
(This work sheet will be for the period from
August 25, 1975 (working day 166) through
October 10, 1975 (working day 200))

General Summary

As of August 25, 1975 (working day 166) structural steel is erected, plumbed and bolted in Units 1, 2, 3 and 4 (south D Unit) and metal deck is almost complete except at the roof. Structural steel in the pool area (Units 5 and 6) has been erected with long span joists expected to be started sometime this week. There have been some serious weather problems due to rain and high winds during the past week and this has delayed erection of steel.

In Units 8 and 9 structural steel is being erected and currently meeting targets between late starts and late finishes. It is expected that most structural steel will be up, plumbed and bolted by the end of next week. This should complete structural steel within the late start/late finish range.

Shear studs have arrived on the job and will be started August 26, 1975 (working day 167). They were due to be started on August 20, 1975 (working day 163) so currently lag by a projected 4 working days. However, it was felt by those attending the construction meeting that the installation of shear studs should meet the early start/early finish target dates.

In-floor work for pour #1 (the easterly pour at elevation 863') has begun with placement of some electrical conduit. This deck is due to be poured out at an early date of September 4, 1975 (working day 173). Presently it does not appear that this date will be met but it is expected that some time will be picked up on the subsequent pours which should pull this floor sequence into line with the current network plan targets.

Hollow metal frames are due to arrive on the job this week and once they are here, a full masonry erection sequence is expected to be put into work. Masonry will lag by about three working days but this time should be picked up as the sequences are established. Mr. Koster recommended that the mason contractor review the expected masonry sequence very carefully with him and Mr. Baker so that the proper movement of exterior masonry particularly is maintained.

Some above floor work has been started at the south half of the first floor but generally rough mechanical and electrical work there including piping, sheet metal and electrical feeders and conduit presently lag anticipated early start/early finish dates. This is not particularly critical at this time but on the other hand, indicates some slowness in getting the job crewed up and under way. The electrical contractor did say he was rapidly running out of places in which to work and had had to reduce his crew size over the last few days. Once floor pours in the D Unit begin, the number of areas in which to work should increase substantially.

Pool filtration equipment arrived on the job today, August 25, 1975 (working day 166). It has been set in place.

The color schedule has now been completed and all selections made. This should not be a holdup to the project from here on out.

Some discussion was held at the meeting regarding placement of mechanical equipment at the mechanical equipment rooms. No specific details were formulated but the mechanical contractor said that he will work with the mason and with the other trades to coordinate efforts and minimize disruption to the job when these units are to be put into place.

In summary, the project continues to move fairly well although progress over the last two weeks has not been so good as previously. The principal reason for this has been excessively rainy weather, accompanied by high

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PE Building, Lansing, Mich.
Page three**

**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

winds which tend to delay erection of structural steel and other exposed field operations. However, it is expected that some of the time lost will be picked up over the next few days.

Ralph J. Stephenson, P. E.

RJS

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**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry**

September 26, 1975

Subject: Monitoring Report #14
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: September 23, 1975 (working day 186)

Monitored from Issue P6 dated May 27, 1975

Actions taken:

- Inspected project
- Color coded field networks
- Evaluated job progress
- Prepared work sheet for project status report for period between September 23, 1975 and November 3, 1975

General Summary

As of September 23, 1975 (working day 186) structural steel is substantially erected, plumbed and belted with metal deck in place except at the natatorium and the north end of the unit D. All supported floor decks have been poured out in the south half of unit D (pours 1 through 7) and in-floor work is being set for supported decks in the north half. The slab on grade in the north half of unit D has been poured out. Exterior masonry is being erected in the swimming pool area and is starting at the south half of the west elevation. Rough interior work including mechanical piping, sheet metal ductwork and electrical feeders and conduit are being installed at the first floor south end and at the natatorium area in the locker room and in the pool service area.

An evaluation of the project based upon the plan of work for Issue P6 dated May 27, 1975 shows that above floor sheet metal ductwork and mechanical piping at the first floor south end of the D unit lags projected late start/late finish dates for this area. It should be quickly pointed out, however, that installation of above floor work was made critical as had been agreed and that although the lag is getting greater than it should, it still is over an arbitrarily imposed

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critical end point. It should be noted though that there is a considerable amount of sheet metal ductwork, mechanical piping and electrical work to install at ceiling areas of supported spaces, and that completing these in sequence will help insure that no finish work is held up as the building is closed in. I strongly recommend above floor rough mechanical and electrical installation be given attention with an end to improving the pace over the next four to six weeks. There is no major cause for concern yet although attention should be provided this important element at an early date.

Exterior masonry at the pool is moving relatively well although it shows as lagging slightly, primarily in completion of the total job. Completion of pool masonry was due for a late finish of September 18, 1975 (working day 184). It still is not complete and so overall lags by about 3 working days. Light weight roof fill at the high gym area was due to be complete by September 2, 1975 (working day 172). It is just now starting and currently lags by about 15 working days. The idea here was to get this roof fill down so that all horizontal roofing surfaces could be installed early. Roofing was given an arbitrary critical end date.

There actually is a slight amount of float time in some of the roofing but as with rough interior mechanical and electrical work, it should be watched carefully so as not to run too late into the fall. The earlier the roofing can be put on, the better the weather will be for its installation.

Interior masonry at the first floor south and at the locker room at the pool on the first floor lags by about 13 working days and as with other interior rough work, should be watched carefully so as not to let it get too far behind so as to maintain the interior rough work sequences.

It should be kept in mind that the objective is to have all interior rough work completed substantially by the time the building is closed to weather so as to allow maximum flexibility in the movement of interior finish trades within the structure.

In respect to installation of the supported deck floor pours, these presently are about seven working days ahead of our projected early start/early finish dates. Also, the slab on grade at the first floor has been completed at the north half ahead of our target date. This is an excellent performance and should open up many new areas for the slightly lagging trades noted above to work in.

In summary, the project has moved reasonably well over the past four

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

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weeks, although there is a tendency to lag in interior rough mechanical and electrical work, interior masonry and slightly in exterior masonry. These are not serious lags at the present time but should be watched carefully to prevent them from becoming major holdups to interior finish work once the building has been closed in.

It should be kept in mind that the general movement of the interior rough work inside the building is planned to be in a counter-clockwise direction and from the lower floors through the upper.

As part of this monitoring, I prepared a project status report from September 23, 1975 (working day 186) through November 3, 1975 (working day 215) and have issued this to those concerned.

Ralph J. Stephenson, P.E.

RJS
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To: Mr. Al Conrad
Mr. D. S. Dudzynski
Mr. H. Knapp
Mr. T. Stein
Mr. D. McKinstry

November 26, 1975

Subject: Monitoring Report #15

Lansing Community College Building - PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: November 24, 1975 (working day 230)

Monitored from Issue P6 dated May 27, 1975

Target Completion Date: September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Inspected project
- Reviewed job progress with Mr. Clarence Courville
- Evaluated job progress
- Participated in construction conference
- Prepared project status report from period from November 24, 1975 (working day 230) through January 2, 1976 (working day 256)

General Summary

As of November 24, 1975 (working day 230) the major work thrust is to close in the entire building. Roofing has been substantially laid at most levels, some sip rib is in place and a good share of the exterior masonry is complete. There has been a problem with sash materials to close in the west elevation but apparently this matter is currently being resolved and should not delay total close-in of the project.

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One area that has experienced a later close-in point than originally anticipated is the pool. However, work efforts will be concentrated there over the next week and by the beginning of December it is expected that waterproofing could begin in the pool area. The pool must first be sand blasted, then waterproofed after which a water test is to be made. Once the water test is completed, ceramic tile can start on the pool and deck. Sand blasting will start this week.

Interior rough work is moving relatively well with sheet metal, plumbing, rough electrical conduit and feeders and fire protection being installed concurrently in most areas of the building. The project status report will show certain portions of the interior rough work as lagging. However, as pointed out previously, the progress of the areas was originally established in the logic plan to be measured against an arbitrary end point. Presently it is emphasized that most major above ceiling utility installation including mechanical, electrical and fire protection will probably be far enough along by the target close-in of January 2, 1976 (working day 256) so that they should offer little, if any, delay to interior finish work beginning at whatever initial major area is selected.

The project status report will also show some minor lags in interior and exterior masonry where sequencing has been changed over the original network. However, overall the project appears to be in excellent condition now to meet its close-in point and start of interior finish work as had been originally planned.

At the construction meeting several points were covered. These are discussed below at random:

- There are no present major long lead time delivery problems. However, I strongly urge that this matter be reviewed at each meeting to insure that no items slip by that may have been altered by conditions that have occurred between the job meetings. Delivery problems are still a major source of difficulty on jobs and should be continually reviewed.
- Pool slip rib is all on the job. There are some miscellaneous damaged areas that are to be refabricated. These will not delay close-in of the building.

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- Temporary heat will be available in the pool as soon as connections can be made and probably the first week in December. The remainder of the building areas will be heated temporarily as of the close-in point presently projected for January 2, 1976 (working day 256).
- Sequencing of interior finish construction was discussed briefly at the meeting. However, it was decided that this sequencing would be considered in more detail at our next diagramming session.

This diagramming session, originally planned for today, November 24, 1975 (working day 230) was postponed until Monday, December 8, 1975 (working day 239). Our diagramming that day will begin at 9 A.M., probably in a conference room at the college. We will plan to work for the full day on interior sequencing.

- The unassigned space design has been completed and is expected to be released for proposals early this week. Bids are currently due on December 5, 1975 (working day 238). It will be important to closely coordinate installation of this unassigned space in the D first floor with current contract work in progress. The matter will be reviewed at our next diagramming session.
- It was brought out that all trade contracts in the Lansing area expire next May and June. This is going to be an extremely difficult period for the project and it is hoped that much of the major work on the job can be completed by the time that at least the more pertinent of these contracts expire. However, as pointed out by Mr. Koster, there is no way we can currently project what the situation will be at that time and therefore, we must proceed on the basis that no strikes or work stoppages will occur and make the necessary adjustments as delays are imposed upon the project.
- The hard tile contractor pointed out that there are large areas of ceramic, terrazzo and quarry tile that must be installed at key access points in the building. It will be very important to plan sequencing of these carefully so as not to seriously interfere with access to the various interior building areas.

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In review, the project is currently in reasonably good shape with some minor dislocations and lags due to logic revisions in the field. However, overall, it appears that the project can be closed in totally by January 2, 1976 (working day 256) and in part, within the next one to three weeks for the start of selective work where temporary heat is needed.

The present goal is to bring as much of the interior rough work to a point where interior finish trades can start most appropriately by January 2, 1976 (working day 256). It appears this goal can be achieved within the present work pattern. The unassigned space at the D building first floor has been released and proposals are due in December 5, 1975 (working day 238). We shall discuss this project at our next diagramming session.

Ralph J. Stephenson, P.E.

RJS/m

To: Mr. Al Conrad
Mr. D. S. Budsynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry

December 23, 1975

Subject: Monitoring Report #16

Lansing Community College Building - PL Building

Lansing, Michigan

Project: 74-87

Date of Monitoring: December 8, 1975 (working day 239)

Monitored from Issue #6 dated May 27, 1975

Target Completion Date: September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Reviewed current job status with Mr. Courville and Mr. Koester
- Began preparation of interior rough and finish networks for various areas

General Summary

As of December 8, 1975 (working day 239) the project is rapidly nearing close-in. Our Issue P6 network dated May 27, 1975 (working day 103) took the project through this close-in point and also included miscellaneous rough mechanical and electrical work. Most of the tasks in this network have been completed or are well on their way to completion and therefore, diagramming at this session took off from the current status of the construction. Most diagramming effort concentrated on the natatorium and the natatorium locker room areas. The major topic was how to best get the interior finish work underway and how to sequence the trades through the various areas of the job. For convenience, the project was broken into eleven basic areas. These are as follows:

N	Natatorium
NL	Natatorium locker room
AS1	Adapted sports area at first floor
CA1	Classroom and corridor areas at first floor
GL2	Gym locker room at second floor
PF2	Physical fitness area at second floor
C2	Corridors, classrooms, lobby, snack area and vestibules at second floor
G3	Gym area at third floor
CR3	Combative room, lobby and corridor at third floor
AD3	Administrative areas at third floor
4	Fourth floor work

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

It was further decided that sequence for the wet trades and those trades that precede and follow would be as follows:

Natatorium to natatorium locker room to gym locker room to 4th floor to 3rd floor to second floor and out on first floor.

Thus, work in the main building area is from the top down and out. We were able to prepare the network diagram complete for the natatorium area (N). This diagram presumed that scaffold erection would begin immediately with rough and finish ceiling work to follow. Upon dismantling of the scaffolding and testing of the pool, ceramic tile would start. Ceramic is currently scheduled to begin in the pool on or about February 26, 1976 (working day 295). This sequence should bring construction of the pool to a good date for allowing various trades to move from this area into the main building area.

We also diagrammed a portion of the natatorium locker room (NL) and will complete this network along with others at our next diagramming session.

Generally work at present is moving reasonably well and it appears that with careful field attention to the sequencing of interior work, particularly wet trades, that the project should be able to be completed well within our current target dates.

As part of our planning work, we prepared a detailed spread sheet (sheet #1) dated December 8, 1975 giving the estimated elapsed durations for each task at all eleven areas. This drawing, #1, along with sheets 8 and 9, has been distributed for review purposes.

Our next diagramming session will be on Monday, January 12, 1976 in the afternoon. Mr. Koster and whomever else he feels appropriate will meet to continue planning the various segments of the work. It would be helpful if representatives of the owner and the architect would also participate in this meeting although it probably will not be necessary for them to be there full time. We should plan to complete additional sections of the interior work at this session. I shall be in touch with Mr. Conrad and Mr. Koster to confirm this meeting.

In summary, the project is currently being closed in and interior work at the natatorium is about ready to begin. Temporary heat is a slight problem although it appears presently that provision of heat is well planned and under control.

Ralph J. Stephenson, P.E.

RJS/a

To: Messrs. Conrad, Budzynski, Knapp
Stein and McKinstry

January 16, 1976

Subject: Monitoring Report #17

Lansing Community College - PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: January 12, 1976 (working day 262)

Monitored from Issue #7 dated December 8, 1975

Target Completion Date: September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job progress
- Continued preparation of interior rough and finish diagrams with Mr. Koster

General Summary

As of January 12, 1976 (working day 262), the building is substantially closed in and interior finish work has begun at several areas. Rough mechanical and electrical above ceiling work is well along throughout the building with interior masonry being currently brought to completion. Fire ceiling installation at required areas is also in good condition. Temporary heat is being provided and at the construction meeting it was mentioned that this heat will be improved over the next few weeks.

A review of each area by the sections designated in Monitoring Report #16 is given below.

Natatorium (N)

Ceiling installation is well in work here with the scaffold erected and most ceiling lath in place. Plastering is just getting underway with

sheet metal, sprinkler piping and rough electrical work moving concurrently.

There has been a slight delay in delivery of electrical fixtures but these hopefully will be on the job prior to dismantling of the scaffold so they can be put in place. It is expected that plastering will be substantially ready for drying and painting by the first of next week - January 19, 1976 (working day 267). This will be well in conformance with the Issue #7 network where painting was due to begin no later than January 21, 1976 (working day 269).

It is hoped that the use of the scaffold will extend no later than about 17 working days from the monitoring date which would bring the target for dismantling scaffold to about February 5, 1976 (working day 280). Our target date in the Issue #8 network was to start dismantling the scaffold on February 4, 1976 (working day 279).

Thus, it appears that work at the natatorium is proceeding in good alignment currently with the expected plan of work. There are no major material problems except for the light fixtures.

Natatorium Locker Room (NL)

The Issue #7 network was updated to reflect current conditions at the natatorium locker room. The logic was also revised from placing the ceramic wall tile first, followed by membrane to installing the membrane first and then installing all ceramic wall and floor tile. Presently most above ceiling rough mechanical and electrical work is completed at the natatorium locker room; some of the plastering has been completed and waterproofing at the floor is to start as soon as locker bases have been constructed. This work is expected to proceed immediately.

Generally work here is slightly behind the projected schedule of work but this lag is not currently too significant and it is anticipated that the slight loss in time will not affect overall work progress.

Adapted Sports Area at First Floor (ASH) and Classroom and Corridor Areas at First Floor (CA1)

Work is proceeding as trades are available from other more critical sections of the building. Presently it is the intent to finish from the top of the building down and completing at the first floor. Thus, progress here is in good condition relative to following finish trades.

Gym Locker Room at Second Floor (GL2)

Most rough work is well along at the gym locker room area and installation of waterproofing will proceed as soon as locker bases are installed and the waterproofing at the natatorium locker room is completed. It is expected to follow with ceramic at the gym locker room as soon as ceramic floor tile has been installed at the natatorium locker room in early February.

Physical Fitness Area at Second Floor (PF2)

Rough above ceiling mechanical and electrical work is presently being completed with screen wall braces and frames due to start soon. Following finish work will be started as the trades move from the upper levels down. Work presently is in good condition.

Classroom, Corridors, Lobby, Snack Area and Vestibules at Second Floor (C2)

Rough above ceiling mechanical and electrical work is being completed presently with above ceiling partition closures to start sometime in the near future. Column enclosures will proceed concurrently with this work.

It is expected that the acoustic ceiling grid at the C2 area will start after terrazzo has been installed.

A separate plan of work has been prepared for installation of terrazzo and quarry tile. Terrazzo is planned to start at the third floor about January 14, 1976 (working day 264). Installation will follow at the second and first floors in order. Once terrazzo is completed at the third floor and ceramic is completed at the gym locker room, quarry tile will begin at the upper floors and move down.

Gym (G3)

Work at the gym will proceed basically as trades are available. Items to be installed prior to painting include: column covers, light fixtures and completion of overhead rough mechanical and electrical work. Presently it is expected to start painting in the gym about February 16, 1976 (working day 287). This will allow installation of the wood floor to start about May 3, 1976 (working day 342).

Once wood floor work begins in the gym, the area will have to be kept clean and free of storage and materials. Therefore, careful planning will be required to insure that the gym area can be put in this condition by the end of April.

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Combative Room, Lobby and Corridor at Third Floor (CR3)

At these areas, rough mechanical and electrical and masonry work is well along with terrazzo due to begin there as noted above within a few days.

Interior finish trades will follow since the upper floors are the early areas in which ceiling and painting work is to proceed. Work is currently in good condition.

Administrative Areas at Third Floor (AD3)

Work here is in about the same condition as at CR3.

Fourth Floor Work (4)

Overhead work at the 4th floor is well along with interior finish installation due to start there soon. With the building substantially in the dry, this will be one of the early work areas.

Mechanical Equipment Rooms

Generally work at the equipment rooms is proceeding reasonably well. There does not appear presently to be any major difficulties.

General Summary

Overall, it is still expected that the sequence of work for finish trades will be natatorium to natatorium locker room, to gym locker room to 4th floor, to 3rd floor, to 2nd floor and out on the 1st floor.

Mr. Koster and I continued diagramming the various areas and to this point have completed logic plans and duration assignments to the following:

- natatorium
- natatorium locker room
- gym locker room
- physical fitness room
- corridors, classrooms, lobby and snack bar and vestibules
at the 2nd floor
- gym
- installation of terrazzo and quarry tile
- finishing of stairwells

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**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

We will continue interior diagramming at our next session on Monday, January 26, 1976. It is the intent to have the construction meeting at 9 A. M. that day and start the diagramming session as close to 9:30 A. M. as possible. Work will continue on through to completion of the logic plan for the remaining areas.

It would be very desirable to finish all logic and duration assignments at this session so that we have a full network from which to monitor the project from here on out.

Ralph J. Stephenson, P. E.

**RJS
m**

**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry**

February 2, 1976

Subject: Monitoring Report #18
Lansing Community College - PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: January 26, 1976 (working day 272)

Monitored from Issue #8 dated January 12, 1976

Target Completion Date: September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Participated in construction conference
- Evaluated current job progress
- Completed preparation of interior rough and finish diagrams with Mr. Koster

General Summary

As of January 26, 1976 Mr. Koster reports that plaster is substantially complete in the natatorium and that the acoustic ceiling panels are being installed. Light fixtures for the natatorium are due on the job today. Work at the natatorium is currently meeting early start/early finish target dates.

In other areas of the building, rough mechanical and electrical work is proceeding well and it is anticipated that within the current schedule most of this work can be carried out without any major delay problems. Equipment room progress has also been good according to reports at the construction meeting and is not delaying work.

Mr. McKinstry requested that we provide him with information about what areas might be available for Bi-Centennial ceremonies on Friday, Saturday and Sunday of July 4th weekend. Mr. Koster will review this with Mr. McKinstry.

Michigan Bell Telephone has asked the college when they can get in to start their above ceiling work. It is the intent to start ceiling suspension and grid shortly and at the meeting it was recommended that Michigan Bell plan to come on the job just as early as they can, within the next month. However, this matter will be confirmed and the general contractor will be in touch with Mr. McKinstry regarding this matter.

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Presently it is assumed that the target completion date on the project is the evening of September 1, 1976 (working day 428). Classes start about September 20, 1976 (working day 439) and Mr. McKinstry requested that the college be able to start move-in by August 20, 1976 (working day 419). If it is possible to have access to some of the facilities earlier, the college would like to have as much lead time as is available. This matter will be discussed in more detail later.

A major effort at this session was to complete diagramming all interior rough and finish work. Mr. Koster and I were able to accomplish this and the rough diagrams have been printed and distributed for use during the period while they are being drafted into final form.

Generally the work is broken up into several areas as outlined in Monitoring Report #17. The major items that will set the pattern of work movement are plaster work, and installation of acoustic ceiling suspension grid and conduit. Plastering work will be completed first in the natatorium and gym locker rooms and then move to other parts of the building. Interior finish work which is set generally by installation of the acoustic ceiling will move in the following manner:

Starts in the audio-visual training area (AVT) to
Administrative area, 3rd floor (AD3) to
Combative room, lobby and corridors at 3rd floor (CR3) to
Physical fitness area (PF2) to
Corridors, classrooms, lobby, snack area and vestibules at
2nd floor (C2) to
Gym locker room (GL2) to
Natatorium locker room (NL) to
Adapted sports and lobby at 1st floor (AS1) to
Classrooms and corridor areas at the 1st floor (CA1)

There is no acoustic ceiling at the gym on the 3rd floor and this area was left out of the above sequence.

It is very important to encourage all trades to adhere to the sequence as closely as possible. While recognizing there may be minor deviations due to work space availability, it is critical that all trades move in the same general direction.

Terrazzo and quarry tile will be installed starting at the 3rd floor and moving down and out of the building. Thus, the total pattern of movement in the facility is starting at the top and working down and out at the lowest level. Generally all involved have agreed that this is an acceptable sequence and it will be the basis upon which the project is managed and monitored from now through completion.

I recommend that all contractors become familiar with the sequencing, particularly the hard tile and the drywall and acoustic. These are the two major trades which determine the pattern of work movement.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

All durations were taken from the spread sheet prepared on December 8, 1975 (working day 239) in which most major contractors participated. Missing durations of which there were very few, were filled in by Mr. Koster and me.

If there are questions, please don't hesitate to contact Mr. Koster or me.

Ralph J. Stephenson, P.E.

RJS/m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry

February 27, 1976

Subject: Monitoring Report #19
Lansing Community College - PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: February 23, 1976 (working day 292)

Monitored from Issue #9 dated January 26, 1976

Target Completion Date: September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status
- Reviewed network with Mr. Paul Koster and Mr. Doug McKinstry

General Summary

Overall work on the project is moving relatively well although at the upper floors terrazzo is underway a little later than had been originally planned as an early start. However, there is float time available in this task. Also, ceiling work at the stairs is lagging early start/early finish dates slightly but again there is float time available.

Phone company representatives were at our construction meeting and it was decided their work will begin in mid-March; hopefully being completed by early May 1976. There is some urgency about getting this work started early since Bell has a fair amount of other work in Lansing on phone service and installation. This will require considerable manpower in spring and summer.

Another matter discussed at the meeting was the letting of a carpet contract. It is expected this contract can be approved by March 22, 1976 (working day 312) and it is assumed that carpet could be delivered thirty working days later - by May 3, 1976 (working day 342). It is hoped to be able to get the carpet at the fourth level down before demountable partition work starts. There is some possibility that demountable partitions could precede carpet installation. This matter will be discussed in more detail at subsequent meetings.

Considerable discussion ensued at the construction meeting regarding installation of various proprietary systems for the owner. Most of this work ties closely into other trades and there appears presently to be no major problem coordinating the work among the trades affected.

The report below discusses each diagram section of the building in order.

Natatorium (N)

Target Completion: May 6, 1976 (working day 345)

Natatorium work is moving very well with pool waterproofing almost complete. It is expected to start filling the pool tomorrow, February 24, 1976 (working day 293) for the water test. Water testing was due to begin no later than February 23, 1976 (working day 292) so it is on target.

Natatorium Locker Room (NL)

Most ceramic tile has been completed with a substantial amount of painting also done. Toilet fixtures are being installed and generally work at the locker room is hitting targets between early and late starts and finishes.

Gym Locker Room (GL)

Target Completion Date: June 24, 1976 (working day 379)

Work at the gym locker room is currently well within early and late starts and finishes. Ceramic tile is practically complete and work there is moving well.

Audio-visual Training (AVT) Fourth Floor

Target Completion Date: June 4, 1976 (working day 365)

Work in this area currently lags early starts and early finishes but is not yet critical since the intent is to install demountable partitions following

laying of carpet. As noted above, carpet is expected on the job by May 3, 1976 (working day 342). This allows the area some sizable amount of float time on present activities.

Combative Room, Lobby, Corridors (CR3) Third Floor

Target Completion Date: May 31, 1976 (working day 361)

Most above ceiling rough work has been completed at this area and presently is well within early and late starts and finishes. It is the intent to begin wood floors at the combative area on April 15, 1976 (working day 330).

Administrative Area (AD3) Third Floor

Target Completion Date: June 8, 1976 (working day 367)

Rough above ceiling work is almost complete and plaster ceilings and partitions are in work. Work at the administrative area is currently progressing between early and late starts and finishes.

Gym Area (G3) Third Floor

Target Completion Date: July 14, 1976 (working day 392)

Painting is well along at the gym and work there is meeting targets between early and late starts and finishes.

Physical Fitness (PF) Second Floor

Target Completion Date: June 28, 1976 (working day 381)

Rough above ceiling mechanical/electrical work is well along at this area and some work has begun on the plaster ceiling installation. Work is currently meeting targets between early and late starts and finishes.

Corridor Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Target Completion Date: July 28, 1976 (working day 402)

Presently work is proceeding on completion of rough above ceiling work and installation of column enclosures. Tasks at the C2 area are currently meeting targets between early and late starts and finishes.

Adaptive Sports and Lobby (AS1) First Floor

Target Completion Date: June 23, 1976 (working day 378)

Work here is still in progress on above ceiling mechanical/electrical, and is meeting targets between early and late starts and finishes.

Classroom and Corridor Areas (CA1) First Floor

Target Completion Date: Evening of August 20, 1976 (working day 420)

Work is currently meeting targets between early and late starts and finishes. Presently rough above ceiling mechanical and electrical work is being completed. Column enclosures are also in work.

Terrazzo, Quarry Tile and Stairwell Work

Target Completion Date: June 18, 1976 (working day 375)

Note: This is an early finish target.

Presently terrazzo is being installed at the third floor to be followed by terrazzo at the second and first. It is hoped to start quarry tile at the third floor once ceramic was done at the gym locker room on March 2, 1976 (working day 298). There may be some difficulty in meeting this current starting target but if the sequence is followed aggressively, it appears that the present schedule for installation of terrazzo floors and quarry tile can be met.

Work is presently underway at stair D2 for ceiling and plastering. This activity is lagging early starts but has not yet passed late starts and finishes.

This whole section of terrazzo, quarry tile and stairwell plastering and finishing should be given a high priority of early attention so that the wet trades can be completed early.

General Summary

Overall the project is currently meeting general targets between early and late starts and finishes with some lag being anticipated in early terrazzo work at the upper floors. However, it is generally felt that this task will be able to be completed within our network targets established.

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**RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER**

I have now drafted the network in final form and a computer run is presently being made incorporating revisions discussed with Mr. Koster and Mr. McKinstry. Probably this network will be issued early next week. I shall distribute copies to the owner, architect/engineer and the general contractor.

It would be greatly appreciated if the general contractor would distribute copies as he feels appropriate to the subcontractors.

Ralph J. Stephenson, P. E.

RJS/m

**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry**

March 11, 1976

Subject: Monitoring Report #20

Lansing Community College - PE Building

Lansing, Michigan

Project: 74:87

Date of Monitoring: March 8, 1976 (working day 302)

Monitored from Issue #9 dated January 26, 1976

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status
- Prepared project status report for period March 8, 1976 (working day 302) to April 12, 1976 (working day 327)

General Summary

Overall work on the project is moving well and most major tasks are meeting targets between early and late starts and finishes. The only present lagging activities are ceramic tile at the natatorium which has not begun and was due to start on February 26, 1976 (working day 295), and terrazzo at the second floor which was due to begin no later than February 16, 1976 (working day 287). Terrazzo at the second floor will start Wednesday, March 10, 1976 (working day 304). These delays are not excessively critical at this time since we have established early finishes for both natatorium work and for terrazzo and tile work at corridors and stairwells. However, since terrazzo is a wet trade, it should be given a high priority of attention. At the pool it is expected that grades will be shot in this week and ceramic will start before the end of the week.

So far as Michigan Bell is concerned, it is anticipated they will come in with their main runs in April, with feeders starting in early May.

A brief review of each section of the building is given below.

Natatorium (N)

Target completion: May 6, 1976 (working day 345)

The pool has been tested and is now ready to receive ceramic tile which will start sometime this week. Ceramic was due to start no later than February 26, 1976 (working day 295). If it begins by Thursday, March 11, 1976 (working day 305), the lag will be approximately ten working days. Since the current target for pool completion is earlier than the owner occupancy point, this should cause no major problem at the present time.

Natatorium Locker Room (NL)

Target completion: June 17, 1976 (working day 374)

All work at the NL area is currently meeting targets between early and late starts and finishes. Most plumbing fixtures have been installed and finishing work is about ready to begin.

Gym Locker Room (GL)

Target completion: June 24, 1976 (working day 379)

Painting is well in work at the gym locker room and all major tasks are currently meeting targets between early and late starts and finishes.

Audio-visual Training (AVT) Fourth Floor

Target completion: June 4, 1976 (working day 365)

Work at the AVT area is currently meeting targets between early and late starts and finishes. It is expected that partition work will probably proceed in the near future since it does exert some restraints on the installation of acoustic ceilings. It was decided at the meeting that carpet would be run to the partitions rather than under the partitions. Carpet currently is due on the job May 3, 1976 (working day 342).

Combative Room, Lobby, Corridors (CR3) Third Floor

Target completion: May 31, 1976 (working day 361)

All work at the CR3 area is currently meeting targets between early and late starts and finishes. Painting is in work at the CR3 area and ceramic tile is well along at the toilet rooms.

Administrative Area (AD3) Third Floor

Target completion: June 8, 1976 (working day 367)

All work at the AD3 area is currently meeting targets between early and late starts and finishes. Most rough above ceiling work has been completed, with plaster partitions and ceilings also substantially complete.

Gym Area (G3) Third Floor

Target completion: July 14, 1976 (working day 392)

Painting is well along at the gym with acoustic panels about ready to be installed. There still remains some minor painting to be completed on these panels. Work here is currently meeting targets between early and late starts and finishes. It is still intended to hold the start of wood floor work at May 3, 1976 (working day 342).

Physical Fitness (PF) Second Floor

Target completion: June 28, 1976 (working day 381)

Work has moved slowly at this area over the past two weeks but there is considerable float time in major tasks and all work is currently meeting targets between early and late starts and finishes.

Corridor Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Target completion: July 28, 1976 (working day 402)

Work at the C2 area is currently meeting targets between early and late starts and finishes. Most plastering is well along and rough work is substantially complete.

Adapted Sports and Lobby (AS1) First Floor

Target completion: June 23, 1976 (working day 378)

Most rough work at this area is well along and plaster ceilings are in work. Activities here are meeting targets between early and late starts and finishes.

Classroom and Corridor Areas (CA1) First Floor

Target Completion: August 23, 1976 (working day 420)

Current work in progress at the CA1 area includes rough above ceiling work and column enclosures. Tasks are meeting targets between early and late starts and finishes.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Terrazzo, Quarry Tile and Stairwell Work

Target completion: June 18, 1976 (working day 375)

Currently terrazzo at the third floor is being rough ground and terrazzo at the second floor is to start Wednesday, March 10, 1976 (working day 304). This gives second floor terrazzo a projected lag of approximately 17 working days. However, it is expected that some time can be picked up on quarry tile installation at the stairwells which should reduce the impact of this terrazzo lag. As noted above, terrazzo is a wet trade and should be expedited, particularly on the upper floors.

Ceiling work is currently well along at the stairwells and is meeting targets between early and late starts and finishes.

Ralph J. Stephenson, P. E.

RJS
m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry

April 15, 1976

Subject: Monitoring Report #21

**Lansing Community College - PE Building
Lansing, Michigan**

Project: 74:87

Date of Monitoring: April 12, 1976 (working day 327)

Monitored from Issue #1 dated January 26, 1976

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status
- Prepared project status report for period - April 12, 1976 to May 25, 1976 (working day 327 - 357)

Overall work continues to move well and most major tasks are meeting targets between early and late starts and finishes. The only present lagging activities are ceramic tile at the natatorium which lags approximately 15 working days and terrazzo and quarry tile floor finishes which lag by about 29 working days. It should be pointed out that neither of these lags is particularly critical at this time since both the natatorium and the areas in which terrazzo and quarry tile are being placed have adequate time beyond their current target completions to be finished by start of move-in. However, with the late work on quarry tile and terrazzo, particularly terrazzo, the delays tend to cause disruption of construction traffic within the building. I highly recommend that every effort be made at as early a date as possible to complete all the wet trades, particularly in main building corridor areas.

A brief review of each building section is given below.

Natatorium (N)

Target completion: May 6, 1976 (working day 345)

The pool has been completely prepared for start of actual ceramic installation. The applying of backup at the gutter has been a time consuming task but is complete. The lag on ceramic tile at the pool is presently about 15 working days. However, as pointed out above, this is measured against the target completion of May 6, 1976 and should cause no major total completion problems. In addition, some tasks that were to move concurrently or following installation of ceramic have already been completed.

Natatorium Locker Room (NL)

Target completion: June 17, 1976 (working day 374)

All work at the NL area is currently meeting targets between early and late starts and finishes.

Gym Locker Room (GL)

Target completion: June 24, 1976 (working day 379)

All work is meeting current targets between early and late starts and finishes.

Audio-visual Training (AVT) Fourth Floor

Target completion: June 4, 1976 (working day 365)

The area is about ready for carpet which is due to be laid May 10, 1976 (working day 347). Demountable partitions at the AVT area will be installed ahead of carpet.

Combative Room, Lobby, Corridors (CR3) Third Floor

Target completion: May 31, 1976 (working day 361)

Work at this area is currently meeting all targets between early and late starts and finishes. Wood floor is expected to begin shortly.

Lobby and corridor work is also in good shape

Administration Area (AD3) Third Floor

Target completion: June 8, 1976 (working day 367)

All work at the administrative area is meeting targets between early and late starts and finishes. Work there is now awaiting arrival of carpet which restrains demountable partitions. Demountable partitions are due on the job the first week in May.

Gym Area (G3) Third Floor

Target completion: July 14, 1976 (working day 392)

Installation of wood flooring is expected to begin shortly. It probably will run slightly later or concurrently with installation of wood floor at the combative room.

There has been some question about connection of sleepers to the concrete floor. However, the matter is being resolved.

Physical Fitness (PF) Second Floor

Target completion: June 28, 1976 (working day 381)

Work at the physical fitness area is slightly ahead with concrete fill now being installed over the styrofoam track.

Corridor Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Target completion: July 28, 1976 (working day 402)

Work at C2 is presently meeting goals between early and late starts and finishes.

Adapted Sports and Lobby (AS1) First Floor

Target completion: June 23, 1976 (working day 378)

Work at AS1 is currently meeting targets between early and late starts and finishes. Acoustic ceiling grid is substantially complete.

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PE Building
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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

Classroom and Corridor Areas (CA1) First Floor

Target completion: August 23, 1976 (working day 420)

Rough above ceiling mechanical and electrical work is being completed, getting ready for installation of ceiling suspension for plastering and acoustic materials. Work here is currently meeting targets between early and late starts and finishes.

Terrazzo, Quarry Tile and Stairwell Work

Target completion: June 18, 1976 (working day 375)

Currently terrazzo at the first floor lags as noted above. Stairwell work, however, has moved very well and currently is slightly ahead of projected early starts and finishes.

Quarry tile at certain areas also lags slightly. Again, this series of lags is disruptive to work sequencing but presently is not a critical behind situation relative to the total project.

* * * * *

The project has moved well over the last six weeks. Presently most work is in line with our current targets. Michigan Bell work has started and will continue on through the months of May and June.

There is a distinct possibility of some strikes in May and June. Currently no one has authentic information as to what trades will go on strike or how long they might be out.

Ralph J. Stephenson, P.E.

RB/m

To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. Tom Stein
Mr. Doug McKinstry

May 13, 1976

Subject: Monitoring Report #22
Lansing Community College PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: May 10, 1976 (working day 347)

Monitored from Issue #1 dated January 26, 1976

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Number of Working Days to Start of Occupancy: 72

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status

419
371
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48

Overall work progress has slowed slightly over the past month although general progress is still such that we should be able to make our target dates as noted above for start of occupancy and project completion.

One of the areas tending to slow is installation of ceramic tile, quarry tile and terrazzo. Ceramic currently lags by 25 to 30 working days at the pool. Quarry tile lags at the first floor by about 34 working days. (It should be pointed out that some work originally restrained by completion of quarry tile at the first floor has moved out ahead of this point.) Terrazzo lags by about 19 working days and this is a real lag since it deals with final grinding and sealing.

The major problem with these three trades is that they are disruptive in nature and affect and sometimes delay finish work that goes on around them. The project is now moving into a phase where a great deal of finish work will be started and it is essential that we clear out wet, rough trades from adjoining areas.

Carpet has not yet been delivered to the job and there was no authentic word at the job meeting as to when it would arrive. Carpet was due to start at the audio-visual area on the 4th floor May 3, 1976 (working day 342).

Doors and hardware are to be put into work shortly although it was pointed out that since these are pre-finished doors that probably no work will be done on them until all rough trades that might affect their installation are completed.

A review was made at the meeting of the status of current strike possibilities. Below is a list of those trades that have had strike potential or do have strike potential.

Carpenters - settled

Laborers - not settled - apparently no present problem

Concrete drivers - some still out, not presently restraining job

Sheet metal workers - settled

Plumbers - contract expires June 1, 1976 (working day 362);
no word on possibility of settlement

Electrical - probably will settle - no current major problem

Ceramic workers - settled, now want to renegotiate

Pipe fitters - contract expires June 1, 1976 (working day 362)

Sprinkler fitters - contract expires June 1, 1976 (working day 362)

Insulators - contract expires June 1, 1976 (working day 362)

Presently it does not appear that there should be any major work slowdown or disruption due to strikes or work stoppages. This, of course, is subject to day-in and day-out changes and should be watched continually.

The first floor area is presently on a hold and the bulletin is being written. It is essential that this area be released since as Mr. Koster pointed out at the meeting, there is a chance that even now revisions to the area may prevent this portion of the building being completed by our target dates. However, all contractors agree that every effort will be made to hit the present target even with the proposed changes.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

A brief review of each building section is given below.

Natatorium (N)

Target completion: May 6, 1976 (working day 345)

Work on ceramic at the pool has moved very slowly and is not expected to be completed for another 20 - 25 working days. Most other work at the pool is done and so it looks presently that we can meet the projected target turnover dates. However, the pool has trended to continue slipping and should be watched carefully.

Natatorium Locker Room (NL)

Target completion: June 17, 1976 (working day 374)

Work at the natatorium locker room is currently meeting targets between early and late starts and finishes. Lockers are due in June 18, 1976 (working day 375).

Gym Locker Room (GL)

Target completion: June 24, 1976 (working day 379)

Major work here is currently meeting targets between early and late starts and finishes.

Audio-visual Training (AVT) Fourth Floor

Target completion: June 4, 1976 (working day 365)

The area is ready for carpet, however, there is no current word on carpet delivery. Some demountable partition work has begun although there has been very little overall work in the area since the last monitoring. Carpet was due to begin at the AVT area no later than May 3, 1976 (working day 342). This is not a serious lag but it does set the pattern for work following. Therefore, I strongly suggest that the area be concentrated upon and cleaned up and completed so as to set a pattern for future area turnover.

Combative Room, Lobby, Corridors (CR3) Third Floor

Target completion: May 31, 1976 (working day 361)

Currently work is just meeting targets between early and late starts and finishes except for the finishing of the wood floor. Wood floor was due to be done by April 30, 1976 (working day 342). It probably now will be finished along with the finishing of the gym floor which is presently in work. Again, there should be no major problem completing the area by the target turnover date but an earlier substantial completion would be helpful in moving down and out of the building.

Generally lobby and corridor work is in good shape.

Administration Area (AD3) Third Floor

Target completion: June 8, 1976 (working day 367)

Work at the administrative area is generally meeting targets between early and late starts and finishes. However, carpet was due to start there no later than May 7, 1976 (working day 346) and has not yet begun.

Gym Area (G3) Third Floor

Target completion: July 14, 1976 (working day 392)

Installation of wood flooring has been moving well and presently finish floor is in work. The target completion date for installing, sanding, finishing and marking the wood floor was June 14, 1976 (working day 372). It presently appears this date could be met.

Physical Fitness (PF) Second Floor

Target completion: June 28, 1976 (working day 381)

Work at the physical fitness area is generally in good condition. There has been a slight delay of completing the concrete fill due to the concrete drivers strike. However, this should not be a problem.

Corridor, Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Target completion: July 28, 1976 (working day 402)

Work at the C2 area is currently meeting targets between early and late starts and finishes.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Adapted Sports and Lobby (AS1) First Floor

Target completion: June 23, 1976 (working day 378)

Work at the AS1 area is currently meeting targets between early and late starts and finishes.

Classroom and Corridor Areas (CA1) First Floor

Target completion: August 23, 1976 (working day 420)

Work here is currently slowed by a hold on the area for changes to be made in the use of the space. This bulletin will be issued some time soon and will free up the work. There is some concern by the general contractor this area may not be able to be completed by its current target date due to these changes.

Terrazzo, Quarry Tile and Stairwell Work

Target completion: June 18, 1976 (working day 375)

This work is the greatest lagging work at the present time and should be concentrated upon continually so as to get all wet and dirty rough trades out of the area where finish trades are to be installed. Presently a heavy effort is being made to complete this work.

* * * * *

The project has tended to slow down overall over the past four weeks, particularly since it is now moving into finish trades and there still are some wet and rough trades to be completed, primarily hard tile, terrazzo and some miscellaneous concrete work.

It does not appear that there is any major obstacle to finishing by the target turnover date. Some isolated strikes are still possible and it will be necessary to evaluate this on an ongoing basis.

Ralph J. Stephenson, P. E.

RJS/m

To: Messrs. Conrad, Budzynski, Knapp, Stein, McKinstry

June 17, 1976

Subject: Monitoring Report #23
Lansing Community College PE Building
Lansing, Michigan

Project: 74187

Date of Monitoring: June 14, 1976 (working day 371)

Monitored from Issue #9 dated January 26, 1976

(Note: Monitoring Report #22 was in error in reporting the monitoring from Issue #1. Like this report, #23, that was also monitored from Issue #9 dated January 26, 1976)

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Number of working days to start of occupancy: 48

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status

Work progress has been slowed over the past month by field problems, many of which were totally unexpected. Unfortunately some of these problems have contributed to a loss in momentum which will have to be picked up quickly if the job is to be brought home by our present target completion dates. Current problems are discussed briefly below:

- The applied ironite waterproofing at the natatorium has spalled in places and shows signs of breaking loose at others. A sample of the separated material is presently being chemically tested by the supplier to determine the problem.

It is expected that this problem can be solved soon and that the patching will not restrain future ceramic installation. An answer has been promised by the ironite supplier by June 16, 1976 (working day 373).

- Ceramic tile at the pool deck was found, upon opening the containers, to be of the wrong size to properly match with tile already installed. Apparently there was an error at the factory in fabrication of the tile and they are now manufacturing tile of a correct size. The tile will be coming off of the packaging line July 6, 1976 (working day 386). The contractor expects to have a truck there that day to pick up the material and bring it back. It should then take about 3 more weeks to install tile on the decks and seats as well as the pool bottom.

It should be cautioned here that the waterproofing finish difficulty should be completely resolved by the time the tile is brought back to the job so installation will not be delayed by late patching of the waterproofing.

- Carpet has still not been delivered to the site although the major share of it is due in today. A decision as to sequencing carpet installation was to have been made subsequent to the construction conference today. Here, a problem exists since an additional amount of carpet was added to the contract by revisions at the first floor. This carpet will be brought to the job later since it is an addition to the order. It was brought out that due to differences in the dye lots, there probably will be a difference in color between the two shipments of carpet. It was hoped the early shipment could be placed in large carpet areas. However, revisions to the first floor commercial art areas have just been issued and probably the area will not be ready for carpet for a considerable period of time. Thus, it may be necessary, in order to maintain work continuity to allocate the carpet that will be arriving today over areas presently available for carpeting.

- The strike status currently is as follows:

Iron workers	-	on strike
Plumbers	-	have settled
Electrical workers	-	probably have settled - should be no problem
Ceramic workers	-	settled
Pipe fitters	-	settled

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Lansing Community College
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Sprinkler fitters	-	no settlement yet; not out
Insulators	-	no settlement; not out

Generally it was felt by those attending the construction meeting that there should be no major strike disruption to the project.

- The late start on carpet has posed some problems to maintaining continuity of partition erection. However, this has been worked around and presently is no serious delay to the job. As mentioned above, carpet will be on the job today and preparation of floors for laying carpet will be started immediately.
- Concourse area floors have been revised to quarry tile. Tile is to be ordered immediately and should be on the job shortly. No major delays are expected.
- It will be necessary to provide full access to outside areas so site work under this contract can proceed to completion within our present targets. This matter is being given day to day attention at the job site.

A brief review of each building section is given below.

Natatorium (N)

The major problem at the natatorium is in the loose ironite and correction of tile size. Both were reviewed above. If work on the pool can resume by early July, there should be little difficulty in completing it by the turnover point. It was requested at the meeting that if additional unexpected delays hold pool construction, the college should be kept closely informed so that they can correctly schedule classes.

Natatorium Locker Room (NL)

Most major work here is complete and presently awaiting delivery of lockers. Lockers should be on the job sometime this week.

Gym Locker Room (GL)

Major work is complete and awaiting installation of lockers. Lockers will be in this week.

Audio-visual Training (AVT) Fourth Floor

This area is still waiting on carpet. Uncountable partitions have been partially installed and there should be very little work remaining once carpet is laid. As noted previously, careful consideration should be

given as to whether the audio-visual and other small areas are to receive the carpet coming to the job today or whether they are to receive carpet coming in at a later date.

Combative Room, Lobby, Corridor (GR3) Third Floor

Most major work is complete and awaiting final items such as lockers, doors, hardware and the dividing partitions. These items probably will be installed later to avoid field damage.

Administration Area (AB3) Third Floor

Work here is moving into the final trimming out and finishing stage. There should be no difficulty completing by the target turnover date.

Gym Area (G3) Third Floor

The wood floor is laid and finished with final painting of the marker lines and decorative trim in work. Bleachers are being assembled and will start today, June 14, 1976 (working day 371).

Physical Fitness (PF) Second Floor

The track has been poured out, screen walls are complete, most painting is done and the area is ready for synthetic floor and lockers. This work will be underway shortly.

Corridor, Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Work here is well along and there should be no major difficulty completing it for the turnover date.

Adapted Sports and Lobby (AS1) First Floor

Work here is slightly behind late start/late finish targets. However, since the area has a very early target finish, there should be no difficulty completing it in time for turnover.

Classroom and Corridor Areas (CA1) First Floor

Bulletin #1 revising this area has been issued and is now being reviewed by the subcontractors. Proposals are due back by June 22, 1976 (working day 377). Work should be authorized shortly after that. Probably this area cannot be completed totally by the present target date of September 1, 1976 (working day 420). However, Mr. McKinstry did request that consideration be given to the critical need to have four classrooms ready by no later than September 15, 1976 (working day 436). The contractors agree there should be no major problem accomplishing this.

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Lansing Community College
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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

Terrazzo, Quarry Tile and Stairwell Work

This work is just being brought to a close with final polishing of terrazzo at the lower floors. There is some additional quarry tile to be added at the concourse area. This tile, as noted above, is being ordered and will be on the job and placed shortly.

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Overall the project has continued to slow over the past four weeks due to several difficult problems that have been encountered. I urge that from here on out careful attention be given to processing of any changes, revisions or making any decisions required to expedite the work.

All contractors are still aiming for the target early occupancy of August 20, 1976 (working day 419) with completion of the job except at the commercial art area by September 1, 1976 (working day 427).

Ralph J. Stephenson, P.E.

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To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. Doug McKinstry

July 13, 1976

Subject: Monitoring Report #24
Lansing Community College, PE Building
Lansing, Michigan

Project: 74:87

Date of Monitoring: July 12, 1976 (working day 390)

Monitored from Issue #9 dated January 26, 1976

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Number of working days to start of occupancy: 29

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status

Overall work progress is being maintained at a level that presently should allow all areas except the first floor commercial art area and the board room to be complete ready for start of owner move-in by August 20, 1976 (working day 419). An area of concern is the swimming pool, but it appears after today's construction conference that this will be ready for activation on August 16, 1976 (working day 415).

Current problems on the job are discussed briefly below.

- Some work has been done on removing and replacing the ironite waterproofing at the natatorium. Work is expected to continue this week with the pool being ready to receive ceramic on the bottom surface by July 19, 1976 (working day 395). No word has been heard yet regarding what it is that caused the spalling but repairs are proceeding in any event.

- Pool deck ceramic tile is almost complete and benches are to start July 13, 1976 (working day 391).
- Carpet apparently is still a problem. Although it is laid in several areas, there is still an additional 600 yards to be brought on the job.

Carpet protection is starting to be a minor problem and traffic may have to be controlled across carpeted areas.

- The strike status is currently as follows:

Iron workers	- Probably have settled as of last week.
Electricians	- have settled
<u>Sprinkler fitters</u>	- no settlement yet; not out. Contract expires at end of month.
Insulators	- have settled

It is the general opinion that strikes should cease no delay to start of occupancy on August 20, 1976 (working day 419). However, if there are any work stoppages later this summer they could affect completion of commercial art areas.

- Processing of bulletins and issuance of change orders has proceeded very slowly. Apparently a change order has not yet been issued for the new commercial art area at the first floor and this is now posing problems of trade continuity and timely delivery of long lead time items.

Other areas affected by problems of issuing the bulletins include the board room which has considerable amount of wood paneling, and north elevator revisions on Bulletin #24. A louver is required at the north elevator and this probably will take some time to get on the job. Meanwhile alternate methods of providing louver requirements will be investigated to see if the elevator can be operated while waiting for delivery of the louver.

- Traffic in the building is now becoming fairly heavy, posing some security and clean-up problems. This will be increasingly the case unless restrictions are placed upon access and travel. Also since building occupancy will be going on while construction is being brought to a close, proper access and segregation of staff traffic from construction traffic should be maintained.
- A hold has been placed on landscaping which essentially brings outside work to a halt. This matter should be clarified immediately.

A brief review of each building section is given below.

Natatorium (N)

The major problem at the natatorium continues to be corrective work at the pool bottom. The ceramic tile deck is almost complete and benches will begin this week. As mentioned above, if work proceeds according to the present schedule, pool start-up can be set for August 16, 1976 (working day 415).

Natatorium Locker Room (NL)

Lockers are on the job and being installed.

Gym Locker Room (GL)

Lockers are on the job and being installed.

Audio-visual Training (AVT) Fourth Floor

No major work has been done here over the past month.

Combative Room, Lobby, Corridor (CR3) Third Floor

Most major work here is complete and little has been done over the past month.

Administration Area (AD3) Third Floor

This area is nearly complete with carpet presently on the job and laying loose at the floor. The administrative area is one of the first areas into which the college will move and so has a high priority of completion. There should be no difficulty finishing it off according to the current status of the area.

Gym Area (G3) Third Floor

Bleachers are almost completely installed at the gym and the area is substantially complete.

Physical Fitness (PF) Second Floor

No major work has been done over the past month. The area is ready for synthetic flooring.

Corridor, Court, Snack Bar, Classroom and Vestibule (C2) Second Floor

Most finish work is well along and there should be no major difficulty completing by August 20, 1976 (working day 419).

Adapted Sports and Lobby (AS1) First Floor

Most work is complete except for miscellaneous finish items. There should be no difficulty completing it by turnover.

Classroom and Corridor Areas (CA1) First Floor

The change order for this area has not yet been issued and work has not yet begun in earnest. This, of course, is serious since there is a sizable amount of work to do and very little of it can be started until the change order has been issued.

Mr. McKinstry again stressed at the meeting that he would like to have, if at all possible, four classrooms ready no later than September 15, 1976 (working day 436). The contractors still agree that if timely issuance of the change order is implemented this could possibly be done, but that the whole area could not be completed by that date.

Terrazzo, Quarry Tile and Stairwell Work

This work is now substantially complete except for miscellaneous finish work and trim items.

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Overall the project is in fair condition and occupancy start can be anticipated by the present target of August 20, 1976 (working day 419). Careful attention to punching out details will be a critical item in meeting the current turnover targets.

Telephone installation should also be given a high priority of attention since normally this work is difficult to bring to a completion point unless it is expedited closely and continuously. I also suggest that the hold on landscaping be clarified so that the contractors involved know whether they are to proceed with the work in the near future or not. Landscaping materials are sometimes difficult to obtain quickly or once obtained to store properly. Therefore, this can get to be a relatively serious problem.

Ralph J. Stephenson, P.E

RJS/pw

To: Mr. Al Conrad
Mr. D. S. Budsynski
Mr. H. Knapp
Mr. T. Stein
Mr. Doug McKinstry

August 12, 1976

Subject: Monitoring Report #25
Lansing Community College PE Building
Lansing, Michigan

Project: 74187

Date of Monitoring: August 9, 1976 (working day 410)

Monitored from Issue #9 dated January 26, 1976

Target Completion Date: Evening of September 1, 1976 (working day 428)

Target Start of Occupancy: August 20, 1976 (working day 419)

Number of working days to start of occupancy: 9

Actions taken:

- Inspected project
- Participated in construction conference
- Evaluated current job status

As of August 9, 1976 (working day 410) the project is moving into the final finish stages on main building work (excluding the commercial art area at the first floor).

A brief review of current pertinent items on the job is given below at random.

- Ironite repairs have been completed at the natatorium and ceramic is to be complete there by the end of this week. Generally there should be little, if any, problem in making the pool area ready for filling, testing and run-in of the controls. The pool startup team will now be here on August 30, 1976 (working day 425). This revised date is satisfactory to all concerned.

- There still has been no formal letter submitted regarding the ironite waterproofing failure. I strongly suggest that this letter be obtained and that it be made a permanent part of the job files for future reference.
- Currently, so far as those at the meeting knew, there are no problems, either present or potential with strikes or work stoppages. Apparently most major trades have settled.
- At the commercial art area on the first floor efforts are still to be made to get four class rooms completed by September 15, 1976 (working day 436). It was cautioned at the meeting that the heating, ventilating and air conditioning work to these four class-rooms cannot be completed and made operative in final form until the entire area is complete. Thus, it is understood that the class rooms may have to be occupied under heating, ventilating and air conditioning conditions that are not optimum.
- North elevator revisions have been issued and apparently fabrication of the louver is in work. It is not known as yet whether this louver will be in place prior to start of occupancy. Chances are it will not and that the north elevator may not be usable until later this month or early in September.
- Punching out of the building will start about August 20, 1976 (working day 419). Generally it is desired to punch the building down and out. Mr. Koster expects that heavy cleanup efforts will be put into work this week.
- Most hold areas and revisions have been clarified or issued. There still is a hold on the west half of the commercial art area at the first floor but it is expected this will be resolved and released within the next week.
- Phone installation is expected to give no major problems. Work is presently underway.
- Furniture will be arriving on August 16, 1976 (working day 415) with a limited staff from the college moving into the building on August 20, 1976 (working day 419). Phone service is expected to be available for this initial move-in.

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Lansing Community College
PE Building
Page three**

**RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER**

- **The date for final inspection by the State Fire Marshall before total occupancy has been set tentatively for August 23, 1976 (working day 420). This date is subject to confirmation.**

- **At the commercial art area, board for the four class rooms is to be delivered within the next week to week and a half. It appears presently that these four class rooms, minus a finish mechanical ventilating system, can be available by the requested date of September 15, 1976 (working day 436).**

Since the project is now at a point where work can be planned and installed on a day to day basis, further monitoring should not be necessary unless unusual conditions arise. I wish to compliment all participants on the project - the contractors, the owner and the architect/engineer for their work. It has been a good job, fitted together well by virtue of strong cooperation given to and by all trades and all parties to the contract.

Ralph J. Stephenson, P.E.

**RJS
m**

**To: Mr. Al Conrad
Mr. D. S. Budzynski
Mr. H. Knapp
Mr. T. Stein
Mr. Doug McKinstry**