

April 5, 1984

Subject: Monitoring Report #1  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

Date of Monitoring: March 23, 1984 (working day 314)

Actions taken:

- Evaluated current status of project
- Reviewed sub-structure and structural frame construction sequence for project
- Prepared network model for close in of entire building
- Prepared laundry list for interior work at each major level

General Summary

Currently the project is moving relatively well in the field, although work is trending toward late starts and late finish dates. Present plans are to begin forming and setting in floor work for deck #1 on the target date of April 17, 1984 (working day 331). This initiates a sequence that brings construction of the structural frame of the building to completion of deck #17 pour, the last deck, the evening of September 10, 1984 (working day 433).

Construction of slabs on grade at each of the major areas is still being held as planned on sheet #5, Issue #1, dated December 5, 1983 (working day 237). Slab on grade work generally follows the pouring out and stripping of decks above.

At the new guard house and bridge, bridge work cannot be completed until level #1 has been poured out. However, this is not expected to materially delay any of the activities presently planned.

All activities shown on sheet #1, Issue #1, dated December 5, 1983 (working day 237) have been completed with

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

the exception of the bridge and guard house work. Mass excavation is in work and footings are well along at area #1.

As the project moves up and out of the ground, I shall plan to directly inspect the job on a regular basis and make a report from observing the field activities. However, for the next month or so it will be adequate to monitor the project at our planning sessions.

In our planning work today, we continued preparation of the laundry list for interior work at each major level. This was done in conjunction with the contractors, and preliminary durations were assigned to various activities. These are being checked by the various contractors at the present time and will be used to assemble the network models as durations are confirmed. In addition, we prepared a network model for close in of the entire facility including masonry, roofing, sash, exterior doors and other such items. There appears to be a possibility that good field continuity may be difficult to achieve in the roofing process. However, this matter is to be discussed in depth among the contractors involved, and we shall review the sequencing once again at our next monitoring session. The next planning date has been set for April 19, 1984 at the Granger office in Lansing at 8:30 a.m. An announcement of this meeting will be prepared and distributed by the architect/engineer and the owner.

At this session it is planned to complete as much of the interior work for each floor as is possible and to assign preliminary durations so a complete set of calculations can be made at that session. Meanwhile, Granger has very kindly printed and distributed copies of the material that was discussed at our session today.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Dennis Anderson  
Mr. William Frank

April 28, 1984

Subject: Monitoring Report #2

Health Care Unit

State Prison of Southern Michigan

Jackson, Michigan

Project: 84:05

Date of Monitoring: April 19, 1984<sup>3</sup> (working day 333)<sub>4</sub>

Date of contract: Approximately November 15, 1984<sup>3</sup>  
(to be confirmed)

Time of construction: 27 months

Completion date: Approximately February 15, 1986 (to be confirmed)

Actions taken:

- Evaluated current status of project
- Prepared network models for levels #1, #2, and #3 interior work
- Prepared network model for mechanical equipment room
- Evaluated current job status

General Summary

This session was held at the office of Granger Construction and focused primarily on completing interior work laundry lists and network models for interior rough and finish activities.

The project is currently moving fairly well in the field according to the status reports obtained from project personnel at this session. There is a slight lag on foundations, primarily because of difficult soil and weather conditions encountered in the installation of footings. Presently, however, it appears that the most difficult portions of this work are complete, and it is expected to soon pick up the lags which presently range from 4 to 8 working days.

The floor pour sequence has been slightly revised, and now area #2 will be the first deck to be formed and poured. It is expected to begin about April 25, 1984.

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**CONSULTING ENGINEER**

(working day 337). Deck #2 was originally scheduled to begin by April 23, 1984 (working day 335) so lags by a projected two working days. The sequence will move on from 2 to 3 to 4 to 5.

Concurrent with construction of deck #5, installation of deck #1 will proceed. Deck #1 forming, thus, should start somewhere between June 12, 1984 (working day 370) and June 19, 1984 (working day 375). Reviewing completion requirements on deck #1, it does not appear that this change will cause any serious disruption to providing the area at the needed date. However, the change should be further evaluated carefully since there is a strong desire to get section #1 closed in early.

Thus, the overall lag, although presently ranging from a projected two working days on through to a lag of four to eight working days at the foundation, should be able to be regained as work proceeds.

The major share of our emphasis today was on preparing interior rough and finish work models for levels #1, #2, #3, and #4. We prepared a master network and then applied it specifically to each floor by using sepias. The sequence was carefully checked with the major sub-contractors involved in each of the respective activities, and it is anticipated that they will make a final check on the logic and durations prior to the final run and issue being prepared.

Level #1 is a shorter duration project than are levels #2, #3, and #4. However, at all floors there are special procurement items that must be taken into account before a final target finish can be set. As we complete our network planning we will plug in delivery dates for key equipment.

At level #2 it appears that work could begin as early as August 16, 1984 (working day 416) which is when present plans are to strip reshores on 3rd level pours. The sequence moves through rough overhead work with interior wall studs beginning about 2/3 of the way through installation of above floor domestic piping. Wall studs could probably begin on or before mid-October, 1984. The early finish of level #2 was calculated at late May, 1985. This, as with the 1st level, is based upon the assumption that delivered items will be available as needed.

Level #3 rough work is expected to begin in early September, 1984 and complete, again without delivery restraints, sometime in mid-June, 1985. Fourth level

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work presently appears to be possible to complete by early August, 1985.

The target contract date is presently about February 15, 1986. Dates presently projected are somewhat earlier than this, and I would suggest since these are presently not confirmed dates that in any major discussions about completion of the project that the target completion date be maintained at the contract target completion. Probably all concerned will work to complete the job just as early as possible, but at present it would be wise to use the contract completion target as the discussion date.

Critical delivery items that may influence the project include the following:

- Sprinkler piping
  - Security layouts and accessories
  - Walk in coolers *Have award stop charge.*
  - Demountable wall panels *No word*
  - Ceramic tile *Sampler submitted*
  - Quarry tile " "
  - Finish and color selections *Color board is turned in to DOC.*
  - Case work *In for approval - need color board back*
  - Mill work *no word on charge.*
  - Surgical lights *no sbm*
  - Head wall trim *no word on sbm.*
  - Sterilizers *submitted - approved as noted (5/7/84)*
  - Toilet partitions *no submitted*
  - Examination lights *no word*
  - Gas columns *no word*
  - Plumbing fixtures *sbm approved as noted*
  - Light fixtures *=*
  - Hollow metal frames *Approved as noted - will be on job in July 1984 - bond.*
- 6/14/84 (372) Sprinkler piping being held up by bulletin #5 submitted. Bull not quoted due to lack of approval. (Given fire marshal May 14, 84) Re-ins reviewed. H.M. approved as noted 2 doors revised by Bull #5 (glass side)*

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- Hardware - *No schedule yet - ~~to be resubmit~~ → released for templates?*
- Doors -
- Luminous ceilings -
- Vinyl floor covering -
- Proprietary security and health and safety systems and devices -
- Food service equipment - *some s/b*

As we complete our diagramming and maintain active monitoring we will continue to identify the status of additional long lead time delivery items. In addition to the architectural trade items noted above, there are several mechanical and electrical delivery items that were discussed at our session. However, none presently appear to give delay potentials, and it is expected that they will be on the project as needed, particularly for the mechanical equipment room.

As part of our work today, we prepared a network model for the mechanical equipment room. The completion target presently being held for activation of this room is November 20, 1984 (working day 483) or earlier if possible. It is hoped to have the equipment on line and operating by mid-November, 1984 or earlier so warm air can be distributed throughout the building, either through the duct work system, which will be partially complete, or by supplementary devices as might be appropriate. Items to be set at the equipment room include motor control centers, cooling tower, fan housings, chillers, fans, and coils.

This completes our major early rough diagramming, although there still are some additional areas to work on including site work and other miscellaneous portions of the project. These will be completed as we monitor the project in subsequent months.

For the next session it is planned to meet at the job site where the prime activity will be monitoring and evaluation through direct inspection of the project. I shall be in touch with Mr. Dave Power and Mr. Robert McComb to set the details of this inspection and subsequent monitorings. Meanwhile, I should like to thank the contractors and the owner and architect/engineer representatives for their help in preparing the preliminary network models. The input

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**CONSULTING ENGINEER**

from these various individuals and organizations was of great help and should help provide the project with a sound and achievable plan of action.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power  
Mr. Dennis Anderson  
Mr. William Frank

May 25, 1984

Subject: Monitoring Report #3  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: May 17, 1984 (working day 353)

Date of contract: Approximately November 15, 1983 (to be confirmed)  
Note: In Monitoring Report #2 the date of contract was noted to be approximately, November 15, 1984. This should be November 15, 1983. Please correct your copy.

Time of construction: 27 months

Completion date: Approximately February 15, 1986 (to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314)

Actions taken:

- Inspected project
- Evaluated current job status
- Reviewed projected near future work

General Summary

This monitoring was conducted at the site, and the project was inspected with representatives of the contractor, the architect/engineer and the State of Michigan. Footing and foundation wall work is nearly complete, and waterproofing, drain tile, and partial backfilling is proceeding as walls are poured. Full backfilling will take place once the level #2 decks are in place.

Supported floor pours are in progress with deck #2 having been poured out on May 9, 1984 (working day 347). Deck #3 has been formed and was being poured the day of the monitoring, May 17, 1984 (working day 353), two working days ahead of the scheduled early start pour shown on network model Issue #2 dated March 23, 1984 (working day 314).



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It is planned to pour out deck #4 by May 24, 1984 (working day 358). This will be about four working days ahead of the scheduled early start of that pour as shown on the Issue #2 network. Deck #5 will follow deck #4, and concurrently deck #1 will be constructed. Plans are to begin deck #1 about May 29, 1984 (working day 360). Thus, if deck #1 and #5 can be constructed concurrently then the project should be in good alignment with the target milestone points.

As noted in the the previous monitoring, floor pour sequences have been slightly revised but will be back in line with planned sequence once deck #1 is built. To date, there does not seem to be any major disruption caused by the revised sequence.

In our meeting the contractor noted that they are presently reviewing the roofing sequence relative to floor pours, and that there might be a slight revision to the floor pour sequence when the upper floor areas are reached. However, for the present we will maintain and monitor against the plan of action noted in the network model.

No major review of procurement was made at this session today, but at our next meeting I recommend we discuss the list of items on pages #3 and #4 of Monitoring Report #2, dated April 28, 1984. Much of the success of this project will rest upon the timely procurement of long lead time items. Therefore, delivery status should be reviewed carefully at each monitoring.

The network model sheets #1 through #6 (through close in) have been drafted and issued. Interior work models for levels #1 through #4 are being drafted and will be issued in the near future. Rough copies of the interior work networks Issue #3 dated April 19, 1984 (working day 333) have been distributed to all concerned.

I shall contact Mr. Dave Power and Mr. Robert McComb to confirm the next monitoring session. Monitorings will be generally held once a month and at each of these we should discuss the current network model in detail, and if revisions or updatings are needed, accomplish these within the structure of our field inspection.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Dennis Anderson  
Mr. William Frank

June 21, 1984

Subject: Monitoring Report #4  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: June 14, 1984 (working day 372)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1986  
(to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314)

Actions taken:

- Inspected project
- Evaluated current job status
- Made informal update of floor pours as revised
- Reviewed procurement
- Issued interior work networks for levels #1, #2, #3, and #4  
Issue #3 dated April 19, 1984 (working day 33) sheets #7  
through #15

General Summary

Currently the project is meeting field work targets between early and late starts and finishes. Concrete work on the structure is moving well, and mechanical and electrical rough work is under way at various interior areas.

There has been a revision to the floor pour sequencing in that the size of the pours at level #3 has been increased slightly, eliminating former pours #9 and #10. Floor pours at level #4 and at the roof have been renumbered to reflect the sequence that now appears to be best for the completion of the structural work. Since there is a close correlation between the former target dates and the new

target dates for the pours it was not considered necessary by the project team to revise the floor pour diagram on sheets #3 and #4. However, I did annotate the monitoring set with the new targets as identified below. Dates are tentative and to be reviewed by Granger.

<u>Floor pour</u>	<u>Date of pour</u>
Level #3 - new pour #5	June 15, 1984 (working day 373)
Level #3 - new pour #6	June 25, 1984 (working day 379)
Level #3 - new pour #7	July 2, 1984 (working day 384)
Level #3 - new pour #8	July 10, 1984 (working day 389)
Level #4 - new pour #11	July 16, 1984 (working day 393)
Level #4 - new pour #12	July 23, 1984 (working day 398)
Level #4 - new pour #13	July 30, 1984 (working day 403)
Roof - new pour #14	August 3, 1984 (working day 407)
Roof - new pour #15 (mechanical room)	August 10, 1984 (working day 412)
Roof - new pour #16	August 20, 1984 (working day 418)
Roof - new pour #17	August 29, 1984 (working day 425)

These pour dates are to be checked by all involved to see that they are satisfactory and that they generally conform to the original plan of work. It should be noted that the Issue #2 date for the last pour(#17) was set at September 10, 1984 (working day 432). Thus, there has been a saving of approximately seven working days. by consolidating pours at the 3rd level.

We did not make any changes to the current sequence and timing of close in and thus, can presently assume that the network model shown on sheet #6 Issue #2 dated March 23, 1984 (working day 314) remains valid. An analysis of these will be made at our next session when there is a detailed floor pour tracking done.

At this session I issued to the Redstone office the interior work diagrams sheets #7 through #15 Issue #3 dated April 19, 1984 (working day 333). These were final drafted copies with early starts and early finishes shown in working days. They were derived from rough models prepared at our diagramming session on April 19, 1984 (working day 333). It should be noted that there are some differentials in end dates, primarily at

the 2nd level over what were discussed in our diagramming session. On further checking early start/early finish calculations at the second level, the early finish date came out at June 27, 1985 (working day 636). The rough network model showed a tentative completion of May 28, 1985 (working day 614). This date revision has been made on the issued network. The change should not prove to be a major difficulty in meeting the desired target completions.

Early finish targets now shown for each of the levels is as shown below:

- Level #1 - Early finish for interior work - January 30, 1985 (working day 531)
- Level #2 - Early finish for interior work - June 27, 1985 (working day 636)
- Level #3 - Early finish for interior work - June 5, 1985 (working day 620)
- Level #4 - Early finish for interior work - July 3, 1985 (working day 640)

It should be noted that the contract completion date presently projected as approximately February 15, 1986 is considerably later than these dates. Thus, it becomes important for the project team (particularly the contractors) to select the desired late finish for each floor. I reviewed this process with the project group and requested that at the progress meeting in July, 1984 this matter be discussed in detail. Once a desired late finish has been selected for each of the levels, we then can calculate late starts and late finishes and add late starts and finishes to the network models.

It is to be stressed that the desired late finish targets may be different than the required contract target dates. I suggest this matter be given very careful attention and thought. It also should be remembered that it is very early in the job, and would be wise to officially maintain the formal target completion as required by contract until there is a greater degree of certainty re close in and the procurement of long lead time equipment and materials. Again, this will be a part of our ongoing discussions at each evaluation.

Following our major discussion about the current status of work, we reviewed progress on submittal of shop drawings, approvals, and procurement. This was not done in detail since only the general contractor was present at this session. However, it is recommended that at the next progress meeting a full review of procurement be made with the full complement of prime contractors.

A brief review of our procurement discussion is given below:

- ~~Sprinkler piping~~ - Shop drawings are presently in the hands of the fire marshall and are being reviewed for approval. There have been delays in getting this approval, and I recommend that the shop drawings be returned as quickly as possible to free up field work and material fabrications. This will be checked by the owner.
- ~~Security layouts and accessories~~ - Hollow metal work has been approved as noted. Some revisions were made in bulletin #5. However, security requirements are not presently restraining hollow metal approvals. It was suggested at our session that a separate and distinct item identified as security components be discussed at each progress meeting and a section of the progress meeting reports be devoted specifically to security items.
- Walk in coolers - Shop drawings have been approved.
- Demountable wall panels - No current information available.
- Ceramic tile - Samples have been submitted.
- Quarry tile - Samples have been submitted.
- Finish and color selection - A color board has been provided to the Department of Corrections. It currently is being reviewed. The project team requested that an approved color board be returned as soon as possible so releases on finishes and colors can be given. 11/15/84  
not  
approved
- Case work - Shop drawings are in for approval. Need color selections.
- Mill work - No current information available.
- Surgical lights - Submittals not yet been made. 11/15/84  
Out of  
control  
need help
- Head wall trim - No current information available. ?
- Sterilizers - Shop drawings have been approved as noted. *A*
- Toilet partitions - No submittals as yet. *a*
- Examination lights - No current information available. ?
- Gas columns - No current information available. ?
- Plumbing fixtures - Submittals approved as noted. *a* ~~Sp. Decisions  
to~~

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

- Light fixtures - No current information available. *~*
- Hollow metal frames - Approved as noted. Presently plans are to deliver early frames in July, 1984 for first level interior work. *~*
- Hardware - No authentic information available. It appears, however, that hardware information has been released for preparation of templates. *nothing visible*
- Doors - Not discussed. *~*
- Luminous ceilings - Not discussed. *~*
- Vinyl floor covering - Not discussed. *~*
- Proprietary security - Health and safety systems and devices - It is recommended that as with other security equipment a special section of the progress minutes be devoted to a review of this subject at each session. The need for constant reminding of suppliers and installers of the status of security components is considered desirable in projects of this type.
- Food service equipment - Some submittals received. No complete information available. *~*

I suggest that a part of each progress meeting be devoted to a terse summary discussion of the status of submittals and fabrication and delivery. The project is moving quite well currently, so it will not be long before some early long lead time items will be needed. We will review these at each of our monitoring sessions.

Overall, the project is moving well, and major activities are meeting targets between early and late starts and finishes. At our next monitoring session we plan to spend a portion of the day reviewing the issued interior finish network models with all contractors on the project. In the interim, these should be issued to the contractors by the owner and the architect/engineer.

The next monitoring has been tentatively set for July 19, 1984. I shall be in touch with the architect/engineer and the owner to confirm that this is an appropriate and suitable date.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power  
(Distribution to prime contractors and others to be by owner and architect/engineer)

July 27, 1984

Subject: Monitoring Report #4  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: July 19, 1984 (working day 396)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1986 (to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314)

Actions taken:

- Inspected project
- Evaluated current job status
- Reviewed interior network models for levels #1, #2, #3, and #4
- Revised early starts and early finishes and late starts and late finishes on interior networks for all floors

General Summary

Erection of the building structure is currently meeting targets between early and late starts and finishes. Floor pours have been made up through new pour #11, and new pour #12 will be made on July 20, 1984 (working day 397). New pour #13 will be made on July 26, 1984 (working day 401). These are each one working day ahead of the planned target pour dates. Columns are presently being formed to the roof level at new pour #14 and the stair tower at the northwest corner is poured up to the stair tower roof level. Concrete work has been moving extremely well and should be finished out with the last pour being made at our current target on August 29, 1984 (working day 425).

Slab on grade work is moving reasonably well with the basement slab on grade to be completed by July 23, 1984 (working day 398). Slabs on grade at pours #1 and #2 are being completed, and at present the other slabs on grade at the 2nd level are being made

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

ready for concrete. We still need confirmation of the X-ray equipment electrical requirements for the slab on grade under pour #7. This should be available in the near future. Area #1 is being readied for storage of electrical equipment and at our session it was confirmed by the contractors that there should be no difficulty in providing this area to the electrical contractor when it is needed.

We reviewed the close in network model on sheet #6, Issue #2 dated March 23, 1984 (working day 314) and updated it to Issue #4 dated July 19, 1984 (working day 396). In the updated network model masonry at the second level is shown as starting on August 14, 1984 (working day 414). Present plans are to erect exterior walls both block and brick at the first and second levels, completing both level #1 and level #2 block and brick work by about September 19, 1984 (working day 439). Exterior block backup at the 3rd level is planned to begin after 2nd level work is complete on September 12, 1984 (working day 434) and be completed at the 3rd level by September 26, 1984 (444). Exterior block at the 4th level is planned to begin on September 26, 1984 (working day 444) and be completed by October 10, 1984 (working day 454). Face brick at the upper levels will probably begin in early October, 1984.

We should review the face brick erection sequence at our next monitoring to insure that it can be completed as early as possible since exterior sash is restrained by the cleaning of this face brick. It would be well to complete the brick in early November if at all possible so that sash can be installed to help close in the building for winter. Meanwhile, the structure is being readied for placement of roof fill and roofing at the various levels. It presently appears that insulation and roofing at the low level pours #1, #2, and #5 can be completed by as early as August 31, 1984 (working day 427). Insulation and roofing at other roof pours should be able to be completed by September 19, 1984 (working day 439). However, a further evaluation of the roofing sequence will be made by the general contractor, and we will discuss the target plans and dates at our next monitoring session.

The major work accomplished during this planning session was to review interior network models for the 1st through the 4th levels. The network drawings had been issued earlier showing only early starts and early finishes with the request that the logic, durations, and general early finish dates be evaluated. This had been done by most of the project team and therefore, the discussion was able to be channeled quickly into constructive methods by which each of the parties' desires on the project could be achieved.



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

There was some concern that the contractors' obligation was to meet early start/early finish targets. We discussed this matter in some detail and reviewed the concept of early starts and late starts with all concerned. We also established target late finish dates for the project (as separate from the required contract date of February 15, 1986) and there was general agreement, although not total agreement, that we would use the evening of October 15, 1985 (working day 713) as the target end date. This end date will be considered the date by which the most complex of the floors, the 2nd level, was to be finished. The other floors would be completed in a sequence from the 1st level to the 4th level to the 3rd level and then to the 2nd level.

In addition, we spaced out the early start dates on the interior finish work starting from hanging board. This should give all contractors concerned a better idea of target dates that must be met as intermediate milestones.

The network models were rough calculated and although they are somewhat difficult to read, Mr. McComb took these with him, will print them, and distribute them to all concerned. The early start dates are generally shown above the nodes, with the late start dates shown below the crossed out early start dates on the original.

I shall be in touch with Mr. McComb shortly to confirm the date of our next session, presently set for 8:30 a.m. August 9, 1984 (working day 411).

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power

August 13, 1984

Subject: Monitoring Report #5  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: 110-47-3199-247

Date of Monitoring: August 9, 1984 (working day 411)

Date of contract: Approximately November 15, 1983  
(to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1986 (to  
be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314)

Actions taken:

- Inspected project
- Evaluated current job status
- Reviewed interior network models for levels #1 through #4
- Discussed and confirmed target early and late starts  
and finishes for interior work

General Summary

The building structure is nearing completion, and the last major supported deck pour is expected to be made at the roof of the mechanical equipment room by August 16, 1984 (working day 416). The westerly half of the roof (old pour #16) has been poured out and the easterly half (old pours #14 and #15) is being poured out August 9, 1984 (working day 411). It appears that the structure of the building will be completed from nine to sixteen working days ahead of original targets.

Slab on grade work is being completed as areas become available. The slab on grade at the 1st level is poured out; the slab on grade at the 2nd level is partially constructed

and will continue to be installed as areas become available. The concentration of effort is now on the section of floor slab on grade between column lines E and G and I through 11. Part of this area will be poured out on August 13, 1984 (working day 413) with the remainder depending for its completion upon electrical underground installation, and confirmation of X-ray rough in work. Apparently the X-ray contract has been let, and information is being gathered now about equipment needs.

Exterior masonry is to start August 13, 1984 (working day 413) and initial efforts on masonry will be to erect block and face brick together. The major target starting date at the 2nd floor for exterior block to begin was projected in the Issue #2 network dated March 23, 1984 (working day 314) at August 14, 1984 (working day 414). It is expected that masonry should move quite well with the amount of good weather presently anticipated over the next two or three months. Block and brick will be built together as much as possible so that brick cleaning can proceed early and allow installation of exterior sash.

Roofing at the main roof is still expected to begin September 21, 1984 (working day 441) or earlier. It should be cautioned that there are two major skylights on the project and that delivery of these should be watched carefully so that as the building is roofed and masonry is completed, skylights can also be brought to completion to allow full interior finish work to proceed. Presently it is expected that the court skylight may be needed as early as October 18, 1984 (working day 460) with the east elevation skylight work presently shown as beginning on October 29, 1984 (working day 457). Again, as with roofing it may be possible to start these installations earlier; thus, material should be made available as quickly as possible.

The close in sequence is still being evaluated by the contractors, and we will do a network model of this work at our next planning session in mid-September, 1984. By that time, enough work on close in should have proceeded to be able to project reasonably well when the total close in date can be expected.

We next discussed interior work at levels #1 through #4. At the previous session on July 19, 1984 (working day 396) an initial projection was made of early starts and finishes, and a selection was made of the desired late finish dates. Since that meeting there have been more discussions between the three prime contractors, and there is tentative agreement concerning the late finish dates to actually be used. It has been agreed that the sequence of work will be to finish floors

from levels one, to four, to three, to two. This means that present planning is to finish the first floor first and the second floor last. It has been also tentatively agreed to use a planning late finish date at the last level to be finished, the second, of the evening of October 1, 1985 (working day 703). It should be emphasized that this is a date that has been discussed among the prime contractors, and is at this time being considered as the most appropriate late finish date discipline for the project. Other floors will be given late finishes spaced backward 20 working days. The following tabulation gives the sequence of floors and their early and late finishes as discussed and tentatively agreed upon in the meeting.

It should be pointed out that of the prime contractors C & L was not represented at this meeting, and so we have assumed that they are in general agreement with the discussions at the session since they have reviewed the matter with the other two prime contractors.

The sequence and finishes are as follows:

<u>Sequence of Floor Finishing</u>		
<u>Floor Level</u>	<u>Early Finish (as calculated)</u>	<u>Late Finish (assumed)</u>
1	P.M. June 28, 1985 (working day 638) ✓	P.M. July 8, 1985 (working day 643) ✓
2	P.M. July 2, 1985 (working day 640)	P.M. Aug. 5, 1985 (working day 663)
3	P.M. July 26, 1985 (working day 657)	P.M. Sept. 3, 1985 (working day 683)
4	P.M. Sept. 10, 1985 (working day 688)	P.M. Oct. 1, 1985 (working day 703)

The early starts projected in the table above must be rechecked and confirmed with the project plans prepared earlier. However, it appears that these are fairly close to what can be expected as an early finish date for each floor. The late finish date for each floor has been assumed from the discussions among the prime contractors and represents a desirable finishing point that all have agreed to attempt to make. We shall monitor the project against these dates in the future.

Monitoring Report #5  
Health Care Unit  
State Prison of Southern Michigan  
Page four

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

I shall now have the rough networks checked and dated and will issue them to the State of Michigan once they have been completed.

We will not, for the time being, reissue any of the close in diagrams since, as noted above, we will be replanning this work at our next session. This session is tentatively set for September 13, 1984 (working day 435) and at this time we should be able to accurately project the total close in point.

Another area that will become quite important soon is installation of the mechanical equipment room. The network model is shown on sheet #15 Issue #3 dated April 19, 1984 (working day 333). It shows major equipment being set at the equipment room at an early start of October 9, 1984 (working day 453). Of course, it would be desirable to begin earlier than that so as to insure a completion for temporary heat prior to the cold weather. The present network model anticipates that the system could be activated for temporary heat sometime in mid-November, 1984. This is still a very desirable target to maintain. At our next monitoring session we shall make a more detailed evaluation of this sequence to confirm that it is suitable and achievable.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power  
(Distribution to prime contractors and others to be by owner and architect/engineer)

September 22, 1984

Subject: Monitoring Report #6  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no.: #110-47-3199-247

Date of Monitoring: September 13, 1984 (working day 435)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1986 (to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314) sheets #2, #3, #4, #5, and #6 and Issue #4 dated July 19, 1984 (working day 396) sheets #7, #8, #9, #10, #11, #12, #13, #14, and #15

Actions taken:

- Inspected project  
Evaluated current job status
- Reviewed close in sequencing with general contractor, owner, and architect/engineer
- Made general progress review with general contractor, major sub-contractors, owner, and architect/engineer

General Summary

The building structure has been completed, exterior masonry is in work, and interior rough work is in progress at all floors. Equipment is being set at the mechanical room and site work is well along with most paving complete. Overall, the project is in relatively good condition as of this monitoring.

A brief review of each major area is given below:

Structure and close in

All supported deck pours have been completed, and all interior slabs on grade are complete. Work on walls at the first level service court is also substantially complete, and grading is in progress at this area of the building. Exterior masonry is in work with block and brick nearly complete at the interior court area. Masonry is also in progress at various other exterior portions of the building.

We had planned to redo the close in network at this session but an evaluation of current status of masonry and projected dates for roofing indicates we can use the Issue #2 network model, sheet #6, dated March 23, 1984 (working day 314) as a general guide. Therefore, updating was not done, and we will continue to monitor from this plan. A further evaluation as to whether a close in network is desirable and needed will be made at our next planning session.

The west low roof area insulation has been installed and the recreation roof deck is being placed. Masonry veneer at the security wall will be started soon. Although there is no firm date yet set for start of roofing it is the intent to begin about October 8, 1984. This is slightly later than had been anticipated but should pose no problem in achieving the major close in points needed to initiate floor finish work. We also discussed installation of exterior sash and skylights. As yet there is no word on when sash will start, but it will follow cleaning of the exterior masonry. Neither was there current word on skylight material. At our next monitoring we shall discuss sash and skylights in more detail to determine when it is expected to install these items. Overall, close in work is presently moving fairly well and should allow start of interior finish trades as presently planned.

Level #1 interior work

Most rough interior work at the first level is currently meeting targets between early and late starts and finishes. Above floor sheet metal work is in good condition, above floor rough domestic piping is well in work, and rough electrical conduit and feeders are being installed. No work has yet started on above floor rough medical gas piping, sprinkler piping, or security conduit. In order to start sprinkler piping, bulletin #5 must be released. This bulletin was discussed at our session, and efforts are being made to get the work released into the field for the affected work to proceed. Overall, the first level area is in fair to moderately good condition.

not  
released

Level #2 interior work

Above floor sheet metal duct work, rough domestic piping, and some electrical conduit feeders are being installed. These items are currently meeting targets between early and late starts and finishes. As with the lower level, other rough items have not been initiated but should be started soon.

Level #3 interior work

Above floor rough domestic piping is moving well and some masonry layout has started. Work is presently meeting targets between early and late starts and finishes.

Level #4 interior work

Some sheet metal duct work and rough domestic piping has been installed and interior masonry layout is in work. Activities at the 4th level are currently meeting targets between early and late starts and finishes.

Mechanical equipment room

Most equipment bases have been poured and fan housings are being set. Motor control centers, the cooling tower, and coils are on the job. Fans and chillers will arrive this week and will be set as quickly as possible. The target for starting to set this equipment was an early start of October 9, 1984 (working day 453). However, there is a revision pending by bulletin #8 related to security bars, fire dampers, and the general configuration of duct work, that must be resolved to complete work at the equipment room. This bulletin is being given careful attention presently. *not released*

In addition, there is some electrical equipment that will not be available until about mid-November, 1984. After delivery it will take about 10 working days to get the system operational. This may delay provision of temporary heat unless an alternate temporary power source can be found.

The present target to activate the mechanical equipment room for temporary heat is being held at November 20, 1984 (working day 483). We shall continue to monitor this area carefully at subsequent sessions since it is a critical element to starting interior finish work at all levels.

Site work

Much of the paving and curb work has been completed and the lots are presently being used for parking. Site work is in good to excellent condition.



General

Overall, the project continues to move well, and it appears that close in operations are on schedule. We have not focused intently on deliveries of key items but have been identifying these as the work progresses. At our next session I suggest we have a detailed discussion about potentially disruptive long lead time items and identify delivery dates for each of these. A list of items that generally cause problems was given on page #3 of Monitoring Report #2 dated April 28, 1984. This list is duplicated below for reference purposes. I have added some items into it that appear to be currently important, and it should serve as a guide for our discussion at the next session.

Those items that may influence the project include:

- exterior sash and glass
- skylights
- sprinkler system components
- security system layout and accessories
- walk in coolers
- demountable wall panels -
- ceramic tile
- quarry tile
- finish and color selection
- casework
- millwork
- surgical lights *be 11*
- headwall trim
- sterilizers
- toilet partitions
- examination lights
- gas columns

- plumbing fixtures
- light fixtures
- hollow metal frames
- hardware
- doors
- luminous ceilings
- vinyl floor covering
- proprietary security, health and safety systems and devices
- food service equipment

Perhaps some of these items are well under control and in some instances might even be on the job. However, they are a list of elements that frequently cause problems on projects of this type, and it would be wise to review these and others that are current or potential problems. It is requested that all prime contractors review this list and add to it for discussion of the items at our next planning session presently set for October 4, 1984 (working day 450).

The network models have now been issued for most major components of the job and are being used to monitor and evaluate job progress. If there are any questions or if revisions to the logic or durations appear to be necessary the prime contractors are urged to convey this information to the owner for action deemed necessary.

Overall, job progress currently is good, and it is hoped that maximum advantage can be taken of the remaining fall weather to close in the building to the greatest extent possible.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power

(Distribution to prime contractors and others to be by owner and architect/engineer)

October 9, 1984

Subject: Monitoring Report #7  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: October 4, 1984 (working day 450)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1986 (to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314) sheets #2, #3, #4, #5, and #6 and Issue #4 dated July 19, 1984 (working day 396) sheets #7, #8, #9, #10, #11, #12, #13, #14, and #15

Actions taken:

- Inspected project
- Reviewed current job status with owner and prime contractors
- Evaluated current job status

General Summary

Exterior block backup and facing brick has moved extremely well over the past two weeks, and the building is being closed in vertically. Roofing is expected to begin shortly and exterior sash and glass should be on the job soon with installation to start in late October or early November, 1984. Masonry is being cleaned as scaffold is removed so masonry cleaning is not expected to delay the start of sash installation.

The major thrust on the job at present is to get the building closed in and to expedite installation of above floor rough mechanical and electrical work to the greatest degree possible so that finish trades can start soon after close in. Work at the mechanical equipment room is proceeding reasonably well, and the target for temporary heat is being maintained for mid or late November, 1984.

*Now mid Dec 1984*

A brief review of each major area is given below:

Close in

The weather has permitted block back up and brick facing to proceed concurrently in many areas, while at others the backup has been erected with facing masonry to follow. In general, exterior masonry is moving very well and meeting major early start/early finish targets as shown on sheet #6 Issue #2 dated March 23, 1984 (working day 314).

Roof concrete fill has been placed and blocking is being installed at all roof levels. Installation of insulation and roofing is due to begin October 8, 1984 (working day 452), and to be complete by mid to late October, 1984. The target date shown on sheet #6 Issue #2 dated March 23, 1984 (working day 314) for completion of the last area of roofing was shown as the evening of October 17, 1984 (working day 460). A major revision to this plan has been that all roofing is to be done within the same period of time rather than roofing each area as it became available. Skylight materials are to arrive about October 15, 1984 with glass to be delivered with skylights.

The intent is to close in as much of the building by early or mid November as possible so the facility is available for relatively unrestricted interior work over the winter period.

Level #1 interior work

Progress over the past three weeks has been good on installation of above floor sheet metal duct work, and this activity is currently meeting targets between early and late starts and finishes. There is a general need to intensify efforts on ~~above floor rough mechanical piping including domestic piping, medical gas piping, and sprinkler piping since it is~~ intended to start masonry at the first level November 1, 1984 (working day 470). Installing major above floor work to the greatest degree possible ahead of masonry will assist in installation of this overhead work.

Rough electrical conduit and feeders are being installed and are currently meeting targets between early and late starts and finishes. In discussions at our monitoring meeting the mechanical contractor indicated that he will start heavy overhead rough work at the first level Monday, October 8, 1984 (working day 452) on domestic plumbing and medical gas. Sprinkler piping has been partially installed and bulletin #5 was released to the state October 4, 1984 (working day 450). Thus, this work should be able to proceed on through to completion soon.



No  
door  
for now

One problem being faced with deliveries is availability of hollow metal frames. These are to be arriving on the job site starting November 1, 1984 (working day 470) and any masonry erected or other wall work put in place prior to this will be erected so as to be able to install the frames at a later date. Constant expediting attention is being given to frames.

A matter to be resolved are the components of the stud wall systems. This affects all floors and primarily concerns agreement as to the type of wall system that is going to be used throughout the project. There have been meetings in the past and mockups prepared of suggested wall systems. However, as of October 4, 1984 (working day 450) a final decision has not yet been made. It is urged that this matter be given top priority now. It is expected that meetings will be held immediately to review and make final decisions on the stud wall to be used. This decision is urgent due to the length of time it takes to process revisions to the work. Thus, the lead time ahead of actual field start must be taken into account when evaluating the need for quick action.

Wall system  
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last  
ward  
Null 9  
Quote  
11-12  
No  
work  
up yet

### Level #2 interior work

Sheet metal duct work has moved well and is currently meeting early start/early finish targets. There is a large amount of rough above ceiling mechanical piping to be installed and this is beginning to approach late start/late finish dates.

There has been some discussion about starting stud walls at the 4th level. If this is to be done then a decision is necessary among the prime contractors as to the sequence of interior rough work to be followed. Again, the need for above floor work is critical since once dividing walls are started it becomes very difficult to efficiently install piping and overhead trades. This matter will be reviewed by the contractors and sequencing decisions made within that group.

4  
↓  
3  
↓ ↓  
2 1

Interior masonry work is just starting at the 2nd level and currently meeting late start/late finish targets. Stud walls were due to start at an early date of October 12, 1984 (working day 456) and a late date of January 18, 1985 (working day 523). Thus, there is some range in between that the contractors can utilize in evaluating where the wall systems are to start and these discussions should be ongoing.

### Level #3 interior work

Much of the above floor rough piping stacks and vents have been installed but no other above floor mechanical or electrical work is yet in place.

Level #4 interior work

The 4th level is approximately at the same position as the 3rd level. Attention is being focused there, however, because there is a possibility that the general contractor will wish to begin stud walls at this level. If so, it would be necessary to move immediately to get the above floor rough mechanical and electrical work installed in the most efficient manner. As pointed out previously, discussions are being held currently among the contractors, and this sequencing will be established soon. By our next monitoring session these sequences should be decided upon, and we should be better able to evaluate the field progress on rough work along with the desired sequencing of the work.

Mechanical equipment room:

Fan housings and coil racks are being installed along with the related duct work and piping. Motor control centers have been set and are being wired. The cooling tower will be set after the chiller has been put in place.

There has been some difficulty with the chiller at the plant, and apparently it is being tested now to determine what the problems are and how they are to be corrected. There is no current word on when the chiller will be brought to the job site. Bulletin #8 which deals with work that affects installation of the equipment room has been quoted - mechanically on September 5, 1984 (working day 429) and architecturally on September 12, 1984 (working day 434). The work to be covered, and how it is to be installed will be resolved October 4, 1984 (working day 450) at a job meeting. Electrical problems that might tend to delay activation of the temporary heat at the equipment room are being addressed continuously, and the target date for activation of temporary heat in mid or late November, 1984 appears to be feasible. We shall evaluate this at each of our sessions in the future.

*not  
can  
yet*

Site work

Most paving and curb work has been completed. Backfilling of the building is also well along, and the outside stair at the southwest corner has been built. At the loading dock, walls are complete and being backfilled and the service court slab on grade is nearly complete at the building. Site work is in relatively good condition for the winter.

General

The project is moving well and generally meeting targets between early and late starts and finishes. There are some

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State Prison of Southern Michigan  
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RALPH J. STEPHENSON, P. E., P. C.  
CONSULTING ENGINEER

future difficulties beginning to appear, primarily in bringing the interior rough trades along on all three contractors' operations at the desired interior areas. This matter is being subjected to ongoing evaluation by the contractors, the owner, and the architect/engineer. We again did not go into detail on the delivery of several critical interior items, and I shall defer this to our next monitoring. Meanwhile, I shall be in touch with the project team to establish the date of our next meeting.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power  
(Distribution to prime contractors and others to be by owner and architect/engineer)

11/13/84

Need security layout

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

November 21, 1984

Subject: Monitoring Report #8  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: November 15, 1984 (working day 480)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Contract time of construction: 27 months

Contract completion date: Approximately February 15, 1986 (to be confirmed)

Monitored from Issue #2 Dated March 23, 1984 (working day 314) sheets #2, #3, #4, #5 and #6 and Issue #4 dated July 19, 1984 (working day 396) sheets #7, #8, #9, #10, #11, #12, #13, #14, and #15

Actions taken:

- Inspected project
- Reviewed current project status with owner and general trades contractor
- Evaluated current job status

General Summary

Close in of the building is moving toward completion with exterior masonry nearly complete and sash installation starting. Skylight frames are on the job; however, glass will not be available until early December, 1984 for the roof skylight and January, 1985 for the clerestory area. Window glass for sash is expected to be shipped November 26, 1984 (working day 486) and will probably arrive on the job about a week later. Later shipments of glass will be made on December 6, 1984 (working day 494) and will probably arrive on the job about a week later.



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State Prison of Southern Michigan  
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12/14/84 (500)

~~Roofing is well along at most levels, with installation of ballast and trim still to be done.~~ At the courtyard roof, paver blocks are yet to be laid.

The job is reasonably well closed in except at building openings which are yet to be closed either permanently or temporarily in exterior walls. Some access areas will be left open to bring in materials and other items from outside to the interior.

Overall, the project continues to move well and is currently meeting most major targets between early and late starts and finishes. There has been a slight tendency to move toward late starts and finishes on interior rough work, but as yet this was not a serious problem.

At our session we briefly reviewed procurement items listed in Monitoring Report #4 dated June 21, 1984 on pages #4 and #5. A brief summary of procurement is given below:

- Sprinkler piping - being installed.
- Security layouts and accessories - deliveries of hollow metal frames and other related items still is somewhat slow. Should check further on this at next monitoring session. \* Security door wiring system submitted not in. Sully part door not submitted. sent to Redstone
- Walk in coolers - no current problem. no problem
- Demountable wall panels - no current information available. no problem.
- Ceramic tile - no current problem. } all colors approved no problem
- Quarry tile - no current problem. }
- Finish and color selection - color board not yet approved. This matter should be reviewed. } → all approved
- Case work - no current problem. submitted approved.
- Mill work - no current problem. not submitted
- Surgical lights - taken out of contract; however, need information for hanger installation. } Need new h/lt layout. Will have by 1st of year. (3rd fl.)
- Headwall trim - no current information available.
- Sterilizers - no current problem. on job ↑ no problem.
- Toilet partitions - no current problem. have color selection

12/14/84

- Examination lights - current information not available. Lights may not be needed. *portable 1.7.84*
- Gas columns - no current information available. *on job*
- Plumbing fixtures - no current problem. *{ have difficulty w/ current. will be resolved Mon. 12/17/84*
- Light fixtures - no current problem. *no problem now.*
- Hollow metal frames - Are arriving. Some on job.
- Hardware - Not reviewed in detail. Appears there may be some trouble with security hardware. *Phone call will be made by - Jerry - Marsha - Bob G.*
- Doors - no current problem. *- some kind of problem w/ frames.*
- Luminous ceilings - no current problem. *no problem*
- Vinyl wall covering - no current problem. *no problem.*
- Proprietary security, health and safety systems and devices - not discussed. *no problem.*
- Food service equipment - no current problem *no problem.*

All of the above are important and should be reviewed on a regular basis. At our next monitoring we will go over the information available on each in detail particularly those that relate to security and proprietary items.

Level #1 interior work

Currently most mechanical and electrical work is meeting targets between early and late starts and finishes. Medical gas piping is not yet started with the late start on this item at November 21, 1984 (working day 484). I suggest that medical gas piping work be reviewed in detail to insure that a start is made sometime in the near future.

Bulletin #5 has not yet been converted to a change order, and this is an item which should be given attention immediately.

At level #1 it is planned to start hanging board as an initial interior major finish trade sometime in early or mid April, 1985. Based on current progress there should be no major difficulty meeting this desired target starting date.

### Level #2 interior work

Most above floor rough sheet metal work is complete, domestic piping and sprinkler piping is moving well, and installation of rough electrical work is meeting targets between early and late starts and finishes. As yet, rough medical gas piping has not begun and as at level #1 it should be given attention soon. Generally, work at the second level is meeting targets between early and late starts and finishes.

### Level #3 interior work

Work here is currently meeting targets between early and late starts and finishes. Above floor rough sheet metal duct work is about 50% complete, rough domestic piping, primarily vents and risers, is well along, and sprinkler piping is just starting. Rough electrical work is meeting targets between early and late starts and finishes. Interior masonry is just starting. Some wall metal studs have been erected.

### Level #4 interior work

Some sheet metal duct work and domestic rough piping has been installed. Masonry is started and most activities at this floor are currently meeting targets between early and late starts and finishes.

### Mechanical equipment room

Work is currently lagging the network model by about 15 working days. The target date for activation of the equipment room was the evening of November 19, 1984 (working day 483). With the current lag it appears mechanical room activation will be in mid-December, 1984. There is a chance that with some temporary electrical connection an earlier date could be met, but at present the planned target is mid-December, 1984.

### General

During our discussion it was mentioned that some of the contractors on the project have not yet received monitoring reports prepared from these meetings. I suggest that distribution of these be made, at a very minimum, to all prime contractors since it is important they understand what is being reported on the job in the monitorings.

At our session I also explained the use of isoquant lines and suggested it as a graphic technique by which a good schedule view can be had on the status of each area of the building. At subsequent meetings I will continue to use color coding and isoquant analysis to help in the evaluations.

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

I shall plan to monitor the project again in mid-December, 1984 and will be in touch with Mr. McComb shortly to set the next session.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb  
cc: Mr. David Power

December 22, 1984

**Subject:** Monitoring Report #9  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

**Project:** 84:05

**State of Michigan project no:** #110-47-3199-247

**Date of Monitoring:** December 14, 1984 (working day 500)

**Date of Contract:** Approximately November 15, 1983 (to be confirmed)

**Time of construction:** 27 months

**Contract completion date:** Approximately February 15, 1985 (to be confirmed)

**Monitored from Issue #2** dated March 23, 1984 (working day 314) sheets #2, #3, #4, #5 and #6 and **Issue #4** dated July 19, 1984 (working day 396) sheets #7, #8, #9, #10, #11, #12, #13, #14, and #15

**Actions taken:**

- Inspected project
- Reviewed current job status with owner, prime contractors and architect/engineer
- Evaluated current job status

**General Summary**

The building is now reasonably well closed in, except for access openings and some skylight areas that will probably be temporarily protected. There has been some problems with electrical equipment needed to start up the heating system for temporary heat. It is expected that sometime after the holiday season heat will be available in the building. At present the lack of temporary heat is not causing severe temperature problems, but it will be essential to soon have a dependable temporary source of heat.

1/15/85  
S. J. L. H.  
started  
1/10/85  
P: 1545.

Work in the building is moving fairly well; however, there is a tendency, noticeable in the last two monitoring evaluations, for some of the rough work, particularly

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mechanical piping to begin using larger amounts of float time than would normally be considered desirable at this point on a project of this type. It must be kept in mind that the closer activities are kept to late start/late finish dates, the less discretionary time is available for emergencies and properly leveling out manpower.

On this project, this early use of floattime is especially noticeable at the upper levels, particularly the 4th floor, where domestic overhead rough piping installation is now barely meeting its late start date. I strongly recommend that the mechanical contractor evaluate his manpower allocations on the project and consider the need to maintain some reserve of float for emergency situations.



Another pair of activities that should be watched carefully are installation of rough medical gas piping and installation of security conduit. These two elements are also beginning to approach late start/late finish dates at the upper levels and their installation should be managed carefully to avoid holding up in wall work and board.

The major milestones coming up over the next few weeks are start of in wall work at stud walls and closely following, hanging of drywall on stud walls. These items are of importance since at most floors they unlock the sequences which lead to full installation of interior finish work.

At our session today we discussed outstanding revisions to the project and attention was focused on those areas that may be of potential delays. Presently bulletins #1 through #7 have been released on change orders. One item on bulletin #8 has not yet been released. On Bulletin #9 electrical and architectural have not yet been quoted. Bulletin #10 through #15 have not been quoted in their entirety as yet. Due to the complex processing machinery for changes to the project, it is advisable to clear away all bulletins and convert them to official revisions to the contract documents just as quickly as possible. I suggest that intense attention be given these bulletins and changes. Apparently there is some discussion of having more frequent meetings during this phase of the project. I recommend that adequate meeting dates be allocated so that the attention is properly given all potential revisions as well as to ongoing work on the most frequent period possible.

#8 still  
unreleased.  
#9 quote  
in on mod  
notes  
done  
1 item on  
#14 quoted  
10 through  
15 not  
quoted  
enough

A brief review of each major area of work is given below:

Procurement

- Sprinkler piping - Work is being installed. Apparently there is no current hold up to acquiring and installing sprinkler materials.

11/19/95  
Talk to  
Jerry re  
Dave #11  
being more  
involved

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- Security layouts and accessories - Security door wiring systems submittals are not yet in to the architect/engineer. These submittals are very important, and attention should be given this matter to see that security work is properly detailed, reviewed, and approved. Some miscellaneous security layout work has been done, but additional attention must be given now. *are in to A/E (maybe?)*
- Walk in coolers - No current problem with deliveries. *NO PROBLEM*
- Demountable walls panels - No known current problem.
- Ceramic tile - All colors have been approved. No known current problem. *WILL BE HERE SOON*
- Quarry tile - Approved. No known current delivery problems.
- Finish and color selection - The color board has been approved and all finishes and colors are now selected. *DON'T HAVE ON JOB*
- Case work - Submittals have been approved. No known current problems. *NO PROBLEM*
- Mill work - Shop drawings apparently have just been submitted. There do not appear to be any current problems.
- Surgical lights - Need new light layout. Will have this information by the first of the year. *NO LAYOUT AVAILABLE YET*
- Head wall trim - No known current problem. *NO PROBLEM*
- Sterilizers - Presently arriving on the job. No known current problems.
- Toilet partitions - The color selection has been made, and there appears to be no known current problem with delivery. *NO PROBLEM*
- Examination lights - These are to be portable lights, and there is no known current problem with them. *NO PROBLEM*
- Gas columns - Apparently on job.
- Plumbing fixtures - There is some difficulty with the carriers that have been installed, or are to be installed. This matter must be given top priority attention now. A meeting is to be held Monday, December 17, 1984 (working day 501) to resolve the problem. *CARRIER DETAIL RESOLVED 11/17/84*

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- Light fixtures - No apparent known current problems
- Hollow metal frames - Are continuing to arrive on the job. No major problem at present.
- Hardware - There has been considerable difficulty getting quotes and information about hardware particularly where changes are involved. The members of the project team are to discuss this on an ongoing basis in order to assure that the information needed is known by all. Security hardware on projects of this type is traditionally a difficult item. It needs constant attention and this attention must be given at all phases of the project.
- Doors - No major current problems; however, must be watched and managed on an ongoing basis.
- Luminous ceilings - No known current problem.
- Vinyl wall covering - No known current problems.
- Proprietary security, health, and safety systems and devices - NO KNOWN current problems.
- Food service equipment - No known current problems

NO PROBLEMS  
PROB W/ FLOW DGL

NO NEW WORK

ORDERED  
NO PROB

Although on many of the above items there appears to be no visible ongoing problems, we should continue at each monitoring session, and the project team at each meeting, to review procurement to insure that materials and equipment are available to the project as needed. This procurement process is one that must be watched carefully throughout the job.

Close in

Close in is substantially complete except for skylights and miscellaneous access openings for trade work. Skylight framing is on the job, and the glass for the courtyard skylight is expected to be on the job sometime in late December, 1984. Glass for the slanted clerestory will be on the job in late January, 1985. Infilling of sash and Spandrelite panels is in progress.

COMPLETE  
LEAK

NEARLY COMPLETE

The building is generally at this time closed to most weather conditions. Roofing is substantially complete and paving blocks have been installed at the roof areas.

Level #1 interior work

Most work at the first level is meeting targets between early and late starts and finishes. Above floor rough medical gas



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pipng and security conduit are, however, two areas that are at or past their late finish dates. In discussions with the mechanical contractor he indicated that it is the intent to run medical gas piping below the duct work and to install it along with in wall work at stud walls. This work should be watched carefully to insure that it does not delay installation of gyp board ceiling suspension and framing, and hanging wall board. Again, security conduit is an important element and although it does not appear presently it will necessarily delay any in wall work it should be given careful attention at all floors.

There is a potential problem at one of the equipment rooms where a fire pump may have to be installed. The present feeling, however, is that the fire pump can be set in the room through existing openings. There is a need, however, to check the routing of electrical conduit to the pump since this conduit may have to be protected and fireproofed. Attention is being given this bulletin change at the present time. The matter is to be resolved the week of December 17, 1984 with the fire marshall.

PROBLEM  
RESOLVED

STILL  
A  
MATTER  
OF  
LOCATION

Level #2 interior work

Most major rough work at level #2 is currently meeting targets between early and late starts and finishes except for above floor rough medical gas piping and security conduit. These two items, again, will probably be installed as in wall work is erected in the stud walls.

Presently wall studs are being erected at the second level and the activity is meeting targets between early and late starts and finishes. The partition system design is generally resolved, although there have been some troubles with the gauge of the metal studs. Heavier gauge stud should be on the job the week of December 17, 1984 and this should allow partition work to proceed without major interruption.

- SLOW  
DELIVERY  
- STARTED  
DELIVERY  
ON 6  
11/11/84

Again, it should be noted that there is a problem getting security hardware quotations on the revisions projected. This could prove to be a very critical item and, as mentioned previously, should be watched carefully.

In wall work at stud walls was due to begin at the second level at an early start of October 25, 1984 (working day 465) and a late start of January 31, 1985 (working day 532). I strongly recommend that a target for the start of this work be established soon and the activity pursued aggressively once started.

### Level #3 interior work

Most rough interior work with the exception of medical gas piping and above floor security conduit is meeting targets between early and late starts and finishes. Studs are moving fairly well at the 3rd level, and it appears presently that in wall work could begin shortly. In wall work had an early start date of November 23, 1984 (working day 465) and a late start of February 22, 1985 (working day 546). A start somewhere in between these dates allowing for proper balancing of manpower is recommended.

Again, it should be noted that the problem with chair carriers for plumbing fixtures is fairly serious, and must be resolved quickly since it will affect completion of studs and hanging of board at the wall areas.

Please note that a dummy activity 664-831 shown on sheet #11 issue #4, dated July 19, 1984 (working day 396) was inadvertently left on the finish diagram. This dummy restraint should be removed. Please indicate this on your copy of the network model.

### Level #4 interior work

Generally work at the 4th level is meeting targets between early and late starts and finishes. Medical gas piping is rapidly approaching its late start and again if it is to be installed with in wall work, it is possible that the problem will not be difficult to resolve. Also, security conduit has not yet begun.

In wall work at the 4th level is due to begin at an early start of December 21, 1984 (working day 505) and a late start of January 25, 1985 (working day 528). These dates are important to maintain if it is still the intent to complete the floors in the sequence as described on pages #2 and #3 of Monitoring Report #5 dated August 13, 1984. It would be well at our next monitoring to review this sequence of completion to insure it is still desired by the prime contractors. Meanwhile, the prime contractors should review among themselves the selected target completion dates to insure that all are in agreement about them.

### Mechanical equipment room

There has been some difficulty getting the sub-station needed to activate temporary heat at the equipment room. The system, however, should be available sometime immediately after the holiday season with the sub-station now expected sometime in late December, 1984. Presently, temporary heat is being provided as needed by local means.

ACTIVATED  
1/10/85  
P:15 AM

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

General

Overall, the project is still maintaining a good pace relative to the contract completion target. However, in the light of the desired targets established by the various prime contractors it is beginning to approach late starts and late finishes in certain trades more closely than would be normally comfortable at this stage of the project. These items have been covered in some detail above, and we will review them at subsequent monitoring sessions.

It is of the utmost importance that all of the contractors work toward mutually satisfactory target dates so that an optimum effort can be made to pursue proper work management in the field and insure that changes, approvals, and other administrative elements essential for a job of this nature be processed expeditiously.

Copies of this monitoring report are being sent directly to each of the prime contractors so as to provide them with an early report of the monitoring evaluation. If there are any comments relative to these reports, please notify me at your earliest convenience.

I shall be in touch with Mr. Robert McComb to set the next planning and monitoring session.

Ralph J. Stephenson, P.E.

To: Mr. Robert McComb

cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell

{KEEP  
SENDING}

MR. FRED FRANK

RESIDENT INSPECTOR SP5M  
4000  
LEAD COOPER  
JACKSON MI 49201

0-5172P2-9510

January 25, 1985

Subject: Monitoring Report #10  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: January 18, 1985 (working day 523)

Date of contract: Approximately November 15, 1983 ( to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1985 (to be confirmed)

Monitored from Issue #2 dated March 23, 1984 (working day 314) sheets #2, #3, #4, #5, and #6 and Issue #4 dated July 19, 1984 (working day 396) sheets #7, #8, #9, #10, #11, #12, #13, #14, and #15

Actions taken:

- Inspected project
- Reviewed current job status with owner and architect/engineer
- Evaluated current job status

General Summary

The building is now closed in except for access openings and the east sloped skylight. The heating system was started January 10, 1985 (working day 517) at 8:15 a.m. and heat is generally available throughout the building.

Work over the past month has slipped slightly particularly at the 2nd and 4th levels and is now approaching late start/late finish targets. This has, in part, been caused by a change in sequence and an emphasis of work on the 3rd level. However, at this time most of the interconnections between tasks at various levels to establish sequencing are past and we are now measuring progress against the end targets shown on the network models. A summary of these dates is given below:

<u>Floor Level</u>	<u>Early Finish</u>	<u>Late Finish</u>
1	p.m. June 28, 1985 (working day 638)	p.m. July 8, 1985 (working day 643)
2	p.m. Sept. 10, 1985 (working day 688)	p.m. Oct. 1, 1985 (working day 703)
3	p.m. July 26, 1985 (working day 657)	p.m. Sept. 3, 1985 (working day 683)
4	p.m. July 2, 1985 (working day 640)	p.m. Aug. 5, 1985 (working day 663)

It can be seen that the intention was to complete the first and fourth floor levels at an early point followed by level #3 and finishing off at the latest date on level #2. If the intent is to revise the sequence and finish the 3rd floor first, and then the fourth and next the second, the network model should be updated. I strongly recommend that at our March, 1985 monitoring session we do a complete review and updating of the network model. By that time, much of the early interior finish work should be well along and the sequence desired by all contractors should be able to be identified in detail. Present plans are to monitor the project on Friday, March 22, 1985 (working day 568). This will give all involved enough lead time to review their thinking on the project and to establish how best to proceed.

The monitoring evaluation below is based upon measurements against the network model using the above noted target end dates. (Note: On page #6 of Monitoring Report #9 dated December 22, 1984 under level #4 interior work in the second paragraph it was stated that "These dates are important but it is still the intent to complete the floors in the sequence as described on pages #2 and #3 of Monitoring Report #5 dated August 13, 1984." The dates described differ slightly from the actual agreed upon desired targets as shown on the Issue #4 network model dated July 19, 1984 (working day 396). Some minor changes were made and the sequence was revised slightly between that monitoring and the actual issue of the network model. The dates that should be used are those actually appearing on the Issue #4 network model dated July 19, 1984).

#### Level #1 interior work

At level #1 most activities with the exception of medical gas piping are meeting targets between early and late starts and finishes. It is generally agreed that medical gas

~~pipng will be installed with in wall work and therefore, the rough overhead work for medical gas piping will be minimal.~~ At each of the floors medical piping shows as being behind but if installed with in wall work medical gas piping should not delay the job.

~~Above floor security conduit also shows as lagging but that is merely because the sequencing used ran from the first floor to the second and that sequencing is no longer valid.~~ At the first level, the critical item to watch is to see that ~~gyp board ceiling suspension and framing is~~ able to start no later than April 11, 1985 (working day 582). At present, it appears that this date can be achieved.

#### Level #2 interior work

~~Most rough above floor mechanical and electrical installation is compelled at the second level and overall, the work is moving relatively well.~~ It should be noted that measuring against a desired target end date of no later than October 1, 1985 (working day 703), ~~gyp board on walls is due to begin no later than March 19, 1985.~~ This is an important date to meet and will require a start on wall studs and in wall work very soon. ~~The late start of interior wall studs on the network model shows as January 18, 1985 (working day 523).~~ To date, there has been a small number of studs erected, but it is expected that this work will proceed aggressively in the very near future. The projected lag can probably be minimized if studs are started within the next 5 - 10 working days.

#### Level #3 interior work

~~This level is presently ahead of most early starts and finishes.~~ Most of the wall studs are up, in wall work is moving, well, and gyp board has started. The late start on hanging gyp board on walls was set at March 18, 1985 (working day 564) so installation is well ahead. The chair carrier problem for plumbing fixtures has been resolved and corrections are to be made shortly.

As has been noted previously, the ahead position here is due to a shift in sequencing that should either be recognized as an official sequence or should be revised or realigned. We shall discuss this sequencing in summary at our February, 1985 monitoring session and actively update the network model at our March, 1985 meeting as noted above.

Since work has moved rapidly on studs and drywall installation of medical gas piping should be watched carefully since most of it will have to go in walls that are presently in work.

Level #4 interior work

~~Studs are just starting and currently lag by about 4 working days.~~ It appears that a heavy concentration of effort will be placed upon stud work in the next few weeks.

Mechanical equipment room

The mechanical equipment room was activated for heat on January 10, 1985 (working day 517) and is presently operating to serve the building during construction. Further work on the equipment room will proceed as the job is brought to completion.

Procurement

- Security systems and accessories - Apparently submittals for security door wiring systems are at the architect engineer's office being reviewed. These are still very important and should be expedited.
- Walk in coolers - No current problems.
- Demountable wall panels - No current problem.
- Ceramic tile - No current problems.
- Quarry tile - Will be on the job shortly. Bedding is installed at 1st level.
- Finish and color selection - No current problems. It was noted that the field office of the owner does not have current information on finish and color selections.
- Casework - No current problems.
- Mill work - No current problems.
- Surgical lights - No layouts have been provided as yet. I suggest these be given early attention.
- Headwall trim - No current problems.
- Sterilizers - No current problems.
- Toilet partitions - No current problems.
- Examination lights - No current problems.

- Gas columns - No current problems.
- Plumbing fixtures - The carrier detail was agreed upon January 17, 1985 (working day 522) and this work will now proceed.
- Light fixtures - No current problems.
- Hollow metal frames - Slow deliveries of frames still poses problems in maintaining installation pace.
- Hardware - No current information on the status of hardware.
- Doors - Have been ordered.
- Luminous ceilings - No current problems.
- Vinyl wall coverings - No current problems.
- Proprietary security, health, and safety systems - No current problems.
- Food service equipment - No current problems.

It can be seen that procurement appears to be in relatively good shape with the exception of door frames, hardware, and security systems. These items must be addressed on an ongoing basis particularly the integration of the architectural elements of the project with the security installation.

#### General

We quickly reviewed the current status of bulletin and change order work, and from the discussion I strongly recommend that revisions to the project be prosecuted as quickly as possible. Bulletin #8 is still not totally resolved. Bulletin #9 electrical quote is not yet in, and bulletins #10 through #14 have not been quoted except for one item on bulletin #14 which apparently has been covered by a change order. Again, the need for prompt attention to submittals and processing is high on this project and should always be a first order of priority.

I shall plan to monitor the project again on Thursday, February 21, 1985 (working day 547) and on March 22, 1985 (working day 568). At the March, 1985 meeting we should



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

plan to do a full update of the network model. If there is any difficulty with these dates, please let me know. I have checked them with Mr. Frank and Mr. Zabik and will confirm it with Mr. McComb in the very near future.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb

cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank

February 26, 1985

Subject: Monitoring Report #11  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: February 21, 1985 (working day 647)

Date of contract: Approximately November 15, 1983 (to be confirmed)

Time of construction: 27 months

Contract completion date: Approximately February 15, 1985 (to be confirmed)

Monitored from Issue #4 dated July 19, 1984 (working day 396) sheets #7 through #15

Actions taken:

- Inspected project
- Attended progress meeting
- Reviewed current job status with owner, architect/engineer, and contractors
- Evaluated current job status

General Summary

Overall, interior stud work, drywall, and plastering has moved well during the past month. However, mechanical in wall work is becoming vital to the job and will be affecting sequencing of drywall and plastering very shortly. It is particularly urgent that heavy attention to mechanical piping be given at the second and fourth levels. These areas are becoming critical particularly the fourth level which is beginning to show increasing lags in work restraining future board and plaster.

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State Prison of Southern Michigan  
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Our next monitoring session is to be held Friday, March 22, 1985 (working day 568) and at that session it is the intent to completely update the current network models sheets #7 through #14. At today's construction meeting it was stressed that the prime contractors should consult with each other prior to that meeting and work out the sequencing they desire for the remainder of the project.

There apparently have been a considerable number of problems encountered by the mechanical contractor, and he is presently attempting to resolve these as soon as possible. By the end of this week, he should have a better idea than at present about how the job can be manned from here on out. In any event, future sequencing of the facility is important since there has been a revision to the sequence in actual work put into the field. To regain the smoothness of field operation, it will be essential to recognize this changed sequence and to reach an agreement so that all are operating with the same planned work flow.

A brief review of each level is given below:

#### Level #1

At level #1 most interior partitions are erected, much of the ceramic and quarry tile surfaces are in place, and work is presently meeting targets between early and late starts and finishes. Gyp board ceiling suspension and framing at the first level has a late start of April 11, 1985 (working day 582). It appears that this date with current progress could be comfortably met. We shall evaluate the actual desired start of this work at our updating on March 22, 1985 (working day 568).

#### Level #2

Considerable progress has been made on erection of wall studs over the past month, although no sizable amount of gyp board has been hung as yet. Gyp board on walls, in accordance with the Issue #4 network model dated July 18, 1984 (working day 396) has a late start of March 19, 1985 (working day 565). Depending upon the sequence of work at the upper floors and how the crews are to move, it appears presently that this date could be met. However, work patterns at upper floors are getting very close to late start/late finish dates, and it will be necessary to concentrate on in wall work at studs to meet the March 19, 1985 (working day 565) date.

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Since the last monitoring on January 18, 1985 (working day 523) first floor work appears to have slipped slightly and although it is not currently in serious trouble, it is trending much closer to late start/late finish dates than has been the case previously.

Another element that must be watched carefully here is the apparent need to raise some mechanical piping already in place to a higher elevation. I did not discuss this in depth with the project staff, but this could be time consuming and could delay the work, particularly installation of ceilings.

### Level #3

Work here has moved very well and is currently meeting targets between early and late starts and finishes. Most studs and a large amount of in wall work has been completed. Gyp board and plastering is well along. Presently plastering work is ahead of its early start/early finish targets. However, as board work moves into the corridors it will be essential to have completed the mechanical piping and other in wall work. This presently has the potential for slowing down completion of boarding up the floor.

Gyp board ceiling suspension and framing at the 3rd level is due for an early start of March 13, 1985 (working day 561) and a late start of May 9, 1985 (working day 601). It appears presently that the project will meet a date somewhere in between. Again, in wall work is the key to maintaining good progress at the third level.

### Level #4

Work here is presently concentrated on completion of wall studs, installation of in wall work, and hanging board. Plastering is just getting under way and barely meeting late start/late finish dates. It will be necessary to concentrate heavily on in wall work over the next few weeks to permit current desired rates of progress to be maintained on framing, board, and plastering. Mechanical installation is one of the more critical in wall items and is being given concentrated, high level attention on an ongoing basis now.

### Procurement

No detailed review of procurement was made at this session. However, as part of our updating we will review each delivery item currently outstanding to measure its impact upon the field work. Those items of special interest that should be discussed include:

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- security systems and accessories .
- finish and color selections .
- surgical lights
- hollow metal frames and doors
- hardware
- proprietary systems
- the entire security system of the facility and its relation to all other physical elements

It would be appreciated if each contractor could research projected procurement plans and bring this information to the session with him.

General

Overall, the project is beginning to slow as it becomes necessary to complete in wall work and to finish hanging board and start plastering at each floor. I recommend that continued expediting of all in wall trades, particularly at the second and fourth floors, be maintained so that the job does not lose its current desirable momentum.

I shall be in touch with Mr. McComb shortly to confirm the date of our next meeting . For now, we are assuming it will be held starting at 8:30 a.m. on Friday, March 22, 1985 (working day 565), and that it will focus on a complete revision to the current network model Issue #4 dated July 19, 1984 (working day 396) sheets #7 through #14.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Richard Ketz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank

April 1, 1985

**Subject:** Monitoring Report #12  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

**Project:** 84:05

**State of Michigan project no:** #110-47-3199-247

**Date of Monitoring:** March 22, 1985 (working day 568)

**Date of contract:** Approximately November 15, 1983

**Time of construction:** 27 months

**Contract completion date:** Approximately February 15, 1985

**Monitored from Issue #4 dated July 19, 1984 (working day 396)  
sheets #7 through #14**

**Actions taken:**

- Updated Issue #4 network dated July 19, 1984 (working day 396) to Issue #5 dated March 22, 1985 (working day 568)
- Prepared network model for security transition
- Reviewed current job status with owner, architect/engineer, and contractors
- Inspected project
- Evaluated current job status

**General Summary**

This meeting was primarily to update the network model Issue #4 dated July 19, 1984 (working day 396). The updating was completed in accordance with the current desired sequences as set by the prime contractors. At present, the project is being sequenced in the field from the 3rd level to the 4th level, with levels #1 and #2 being brought to completion

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

concurrently. Therefore, we updated the network in accordance with this sequence, and revised end dates for the project were established as follows:

	<b>Early Finish</b>	<b>Desired Late Finish</b>
<b>Level #3</b>	<b>p.m. Aug. 12, 1985 (working day 668)</b>	<b>p.m. Aug. 27, 1985 (working day 679)</b>
<b>Level #4</b>	<b>p.m. Aug. 6, 1985 (working day 664)</b>	<b>p.m. Sept. 25, 1985 (working day 699)</b>
<b>Level #1</b>	<b>p.m. July 16, 1985 (working day 649)</b>	<b>p.m. Aug. 13, 1985 (working day 669)</b>
<b>Level #2</b>	<b>p.m. Oct. 23, 1985 (working day 719)</b>	<b>p.m. Oct. 23, 1985 (working day 719)</b>

The sequencing of the floors is generally established by the desired late finishes. The updated network models were printed and given to Mr. Dave Power for distribution to the owner, the architect/engineer, and the prime contractors. These should be in the concerned parties hands by the time this report arrives. It should be kept in mind that the desired dates as established in this session are still considerably ahead of the contract completion dates but will be used to monitor project progress.

Overall, progress has been fair to good over the past month with improvement particularly noted in installation of rough above floor mechanical work. Other trades including architectural and electrical have also kept pace and work on these has also moved well.

As part of our session today, we also prepared a network model for the security transition where the perimeter security line is moved so as to encompass the building within the interior of that security area. The Jackson Prison staff and management is currently considering how best to keep the interior of the new facility separate from inmate areas. The network model for this transition is shown on sheet #16 issue #5 dated March 22, 1985 (working day 568).

In it, node #1217 is identified the point where perimeter security must be in place if we are to complete final grading and seeding by a contractor desired completion of October 1, 1985 (working day 702). Essentially it indicates that the work

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from the point where prisoner traffic can be routed through the new security area out to completion of the security transition job will require about 32 working days. Therefore, perimeter security should be in place by August 15, 1985 (working day 670).

Since this is a relatively near date, it is important to start planning now for how perimeter traffic is to be handled and routed. Prior to rerouting of prisoners through new security some work has to be done on stockpiling backfill, extending existing fences, and installing fence security devices. The prison management staff and the project staff will confer on an ongoing basis to establish the necessary activities required for this work. I urge that all concerned review the network model on sheet #16 Issue #5 dated March 22, 1985 (working day 568) very carefully to identify responsibilities for accomplishing the various tasks.

As noted above, I have printed sheets #7 through #14 and sheet #16 and issued these to all concerned for their review and comments. We shall start final drafting on these updated networks in the very near future so it would be appreciated if any revisions that are to be made would be communicated to me as soon as possible.

The next monitoring meeting is scheduled for mid-April, 1985, and I shall be in touch with Mr. Robert McComb shortly to set the date.

Ralph J. Stephenson, P. E.

RJS:eps

To: Mr. Robert McComb

cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank



April 26, 1985

**Subject: Monitoring Report #13**  
**Health Care Unit**  
**State Prison of Southern Michigan**  
**Jackson, Michigan**

**Project: 84:05**

**State of Michigan project no: #110-47-3199-247**

**Date of Monitoring: April 19, 1985 (working day 588)**

**Date of contract: Approximately November 15, 1983**

**Time of construction: 27 months**

**Contract completion date: Approximately February 15, 1985**

**Monitored from Issue #5 dated March 22, 1985 (working day 568)**

**Actions taken:**

- Inspected project
- Reviewed current job status with general contractor, owner, and architect/engineer
- Evaluated current job status
- Calculated late start/late finish dates for full evaluation

**General Summary**

The project is now being monitored from the preliminary updated network, Issue #5 dated March 22, 1985 (working day 568). The dates shown on this network were early starts and early finishes and were to be used primarily for the review of the contractors involved. There have been no formal responses to the issuance of this diagram, and so for the purposes of this monitoring I have assumed there are no major revisions being requested by the contractors. In light of this, and using the target late finish dates reported in monitoring report #12 on page 2, I calculated late starts and late floor finishes from the desired late finish dates as follows:

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Level #3 - p.m. August 27, 1985 (working day 679)

Level #4 - p.m. September 25, 1985 (working day 699)

Level #1 - p.m. August 13, 1985 (working day 669)

Level #2 - p.m. October 23, 1985 (working day 719)

These late finishes were used to calculate backwards on the rough diagram and were in part used for this monitoring. It should be noted there is some validity in monitoring at this point against early start and early finishes since it has been only 20 working days since we updated the network. Thus, if the logic that was inputted by the various prime contractors was reasonably accurate, deviations from early starts and early finishes should not be too great as of this date.

However, it was noted that there has been some loss in time measured against these early starts and early finishes particularly at the upper floors. At level #2, plastering was due to begin on an early start of April 4, 1985 (working day 577). It is now not expected to begin for 10 to 15 working days or in early to mid-May, 1985. This imposes a lag on that work over late starts and late finishes of from 10 to 15 working days. It will be important to consider how this lag can be picked up in subsequent work if the intent is still to complete the job by a target date of October 24, 1985 (working day 719).

At level #3, plastering is well along, demountable partition work is in progress, and some ceiling suspension and framing has been installed. There the project is just meeting early starts and early finishes on critical activities, and is slightly ahead of late starts and late finishes. Thus, level #3 is not in an overly difficult condition at this time.

At level #4, the demountable wall panels are in work, gyp board is being completed on the walls, and plastering continues. There is slightly more float time available at the 4th level than at levels #2 and #3 so this current lagging status compared to early starts and early finishes is not quite as serious.

First level work is somewhat at a standstill right now with the next operations to start being on installation of gyp board ceiling suspension, and framing. The early start of this work was shown at April 19, 1985 (working day 588). There was no current mention of when the work would start. There is float time available, however.

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It is presently the intent to maintain progress on the security transition operation as shown on sheet #16, Issue #5 dated March 22, 1985 (working day 568) as shown and some work has begun on installing security fencing at the north to the new building. We are still assuming the routing of prisoner traffic through the new security area will occur on or before August 15, 1985 (working day 670).

General

Overall, project progress has slipped when compared to early start and early finish dates established in our monitoring of March 22, 1985 (working day 568). This is not a particularly good sign of progress since it has only been 20 working days since that updating. Therefore, careful attention should be paid so as not to encroach further upon float time if it is the prime contractor's desire to finish this project by October 23, 1985 (working day 719). I shall wait until the next monitoring to fully update the network model so as to be able to better evaluate whether or not the current dates shown in Issue #5 dated March 22, 1985 (working day 568) are those that all prime contractors actually wish to work to. Again, if there are any comments on this latest issue of the network model or if any changes are desired, it would be greatly appreciated if these would be communicated directly to me, to the Department of Management and Budget, or to the architect/engineer, whichever is most convenient, as soon as possible.

Ralph J. Stephenson, P.E.

RJS:aps

To: Mr. Robert McComb

cc: Mr. David Pover  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank

May 22, 1985

**Subject: Monitoring Report #14  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan**

**Project: 84:05**

**State of Michigan project no: #110-47-3199-247**

**Date of Monitoring: May 17, 1985 (working day 608)**

**Date of contract: Approximately November 15, 1983**

**Time of construction: 27 months**

**Contract completion date: Approximately February 15, 1985**

**Monitored from Issue #5 dated March 22, 1985 (working day 568)**

**Actions taken:**

- Inspected project
- Reviewed current job status with general contractor, owner, and architect/engineer
- Evaluated current job status
- Reviewed various methods of recapturing present lags

**General Summary**

**The project is presently being monitored against late finish dates as follows:**

- Level #1 - August 14, 1985 (working day 669)
- Level #2 - October 24, 1985 (working day 719)
- Level #3 - August 28, 1985 (working day 679)
- Level #4 - September 26, 1985 (working day 695)

**These late finish dates are to be used as the vehicle for updating the network models which will be issued sometime in the near future with the updated dates on them. The analysis below is based upon these late finish measurement points.**

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In summary, the lag at the first level is about two working days. At the second level, the lag is currently about 24 working days, and at the third level work is meeting targets between early and late starts and finishes. At the fourth level, work is also meeting targets between early and late starts and finishes. The major concern is presently with second level work where the lag is primarily in the start of plastering on stud partitions.

The late start of this work in the Issue #5 network model dated March 22, 1985 (working day 568) was to be April 19, 1985 (working day 688). Present projections are that plastering will begin about the middle of next week, say near May 23, 1985 (working day 612) which gives a lag over the projected late start of about 24 working days.

It will be difficult to pick up this time on plastering and therefore, if any durations are to be shortened or logic must be changed it is going to have to occur generally at the second floor if time is to be picked up over the projected latest finish of the job of October 24, 1985 (working day 719).

Using the 24 working day lag to project an anticipated end date of the total project, the new end date is about November 29, 1985 (working day 744). This is getting much closer than may be desirable to the contract completion date of February 17, 1986 (working day 798). The loss in time over our previous updating which was Issue #5 dated March 22, 1985 (working day 568) has been about 25 working days. The total time from our previous updating to today's monitoring has been about 40 working days. Thus, we have lost about 25 working days in an elapsed time of 40 working days. This trend is a matter of concern, and although we still have considerable time prior to the contract completion date for finishing the project over where we are presently, the loss in time is something that certainly should be evaluated by all prime contractors since it is generally greater than should be expected.

A brief review of status of each the levels is given below:

#### Level #1

At level #1, the ceiling suspension for gyp board will probably begin within the next few days. Very little has been

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done at the first level since the previous monitoring on April 19, 1985 (working day 588). However, work there is not in serious condition since there is considerable float time available even over the late finish date of August 14, 1985 (working day 669). Presently the lag there is about two or three working days behind this late finish.

#### Level #2

Level #2 is the last area to be finished as projected in our plan of work and currently lags by about 24 working days. This lag is fundamentally in plastering which has not yet started in production on partitions. Present plans are to begin plastering about May 23, 1985 (working day 612) and the plastering work will probably take from 30 to 35 working days to complete. It was projected to take about 26 working days, so some slight pick up in time might be possible. Any recapturing of other time on the job between now and when the second level is to be completed is going to have to occur in subsequent critical items such as painting, acoustic work, case work and mill work, and completion of finishes. Thus, we can generally assume that the current lag of 24 working days will extend the late finish of October 24, 1985 (working day 719) out from 15 to 25 working days.

*6/20/85  
(631)  
Lag - 21 to  
~~30~~  
22 w!*

#### Level #3

At level #3, plastering is complete, prime painting is complete, ceiling work is well along, and acoustic ceiling panels are now being applied. Vinyl floor covering is also in work, and overall the entire floor work is generally meeting targets between early and late starts and finishes with the trend being toward the early starts and early finishes. Thus, level #3 is in reasonably good condition and could be expected to meet its target late finish of August 28, 1985 (working day 679).

#### Level #4

At level #4, plastering is being completed and should be done within the next two to four working days. Overall work there is meeting targets between early and late starts and finishes with a slight lag over the early starts and finishes. It appears presently that there will be little, if any, difficulty if meeting the target late finish of September 26, 1985 (working day 699).

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General

The project appears to be from 15 to 25 working days behind the desired late finish of October 24, 1985 (working day 719). Most procurement problems have been resolved although there still may be some difficulties with security and regular hardware. There are some pending changes but none that presently appear to be overly serious relative to delaying the job.

Still of concern is elevator installation. Drilling continues for casings, and there is no authentic word on when the plungers, platform and cab work will be able to begin. Plunger drilling is a very dirty operation, and strong efforts are being made to get it completed so work can move on out of the first and second levels particularly, and finish up with the interior trades necessary to enclose the elevator shaft and to get the platform and cab work done.

Site work, primarily final grading and landscaping, is starting. It is expected that some seeding is to start soon, and there appears to be no major delays to finishing site work before this fall.

We briefly discussed the dates of security transition, and it is fully expected as of today to hold a perimeter security activation date of August 15, 1985 (working day 670). As pointed out previously, this is the point in time at which prisoners will be routed through the new security area and which will allow removal of the 8 x 8 existing door and frame and other work to begin. Prior to the rerouting of prisoner traffic, the existing fence at the north will have to be extended, security lighting installed, and whatever dirt necessary to stockpile inside the secure areas will have to be moved to that point. In addition, the owner, after prisoner traffic is routed through the new security, will have to complete installation of the existing sanitary sewer link.

We will complete the site work at this security transition area within 30 to 35 working days after prisoners are routed through new security. The goal presently is to finish the final grading and seeding of the site by October 1, 1985 (working day 702). It appears presently possible to meet this completion.

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It should be noted that the painters went on strike as of May 13, 1985 (working day 604). There is no current indication as to whether this will be a short, medium, or long strike. It will be critical to the job almost immediately and therefore, we will track this strike carefully. The carpenters contract expires May 23, 1985 (working day 612). This is also a critical trade, and we will watch negotiations as closely as possible. There is no authentic information on what other trades might possibly encounter work stoppages late on this summer.

Ralph J. Stephenson, P.E.

RJS:sp

To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank



June 27, 1985

**Subject: Monitoring Report #15**  
**Health Care Unit**  
**State Prison of Southern Michigan**  
**Jackson, Michigan**

**Project: 84:05**

**State of Michigan project no: #110-47-3199-247**

**Date of Monitoring: June 26, 1985 (working 631)**

**Date of contract: Approximately November 15, 1983**

**Time of construction: 27 months**

**Contract completion date: Approximately February 15, 1985**

**Monitored from Issue #5 dated March 22, 1985 (working day 565)**

**Actions taken:**

- Inspected project
- Reviewed current job status with architect/engineer
- Evaluated current job status
- Discussed project briefly with prime contractors

**General Summary**

The project is maintaining a position substantially as at the previous monitoring on May 17, 1985 (working day 608), except at the first level where the lag has increased slightly. The lag at the first floor ranges between 9 and 16 working days over late starts and late finishes. However, due to the large amount of float time available this is presently not a serious matter.

At the second level, the lag is from 20 to 22 working days primarily in the plastering operation. It appears that this lag will be very difficult to reduce although it is possible that once upper floor areas are complete, trades following plastering at the second level might receive more intensive attention and thus, times might be compressed. However, this cannot

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be counted upon and therefore, it presently appears that the second level will be complete sometime in late November or early December, 1985. The target late finish for the second floor which was also the desired end date for building work was set at October 24, 1985 (working day 719).

At the third and fourth floors, work is moving well into finish trades and all major activities are currently meeting targets between early and late starts and finishes.

A brief review of the status of each of the levels is given below:

Level #1 - Desired late finish August 14, 1985 (working day 659)

At level #1 it appears presently that most work there is fill in miscellaneous finish work as may be required. The area is still being disrupted by the cylinder installation for the hydraulic elevators. The elevator contractor is still encountering serious problems in sinking these shafts and the operation being dirty and space consuming does affect finishing at this lower level.

At other areas in the first level, finish work is proceeding as trades have time to spend there. As noted above, this is not as yet a serious problem since there is considerable float time in completion of the first level.

Level #2 - Desired late finish October 24, 1985 (working day 719)

The lag at level #2 is currently 20 to 22 working days primarily in plastering. This is slightly less than the lag reported at our previous monitoring on May 17, 1985 (working day 608). Since there is a considerable amount of work yet to be done following plastering, and since this work has been cut to what appears to be reasonable and even minimum times, it may be difficult to recapture any of the current lag. This would bring completion of the second level to late November or early December, 1985. Present projections are that plastering will be completed and dried by July 25, 1985 (working day 655).

Level #3 - Desired late finish - August 27, 1985 (working day 679)

Level #3 work continues to move well and is currently meeting targets between early and late starts and finishes. At

7/24/85  
(LST)

- #2 elev  
Casing ready  
to receive  
jaws

- Have elev  
operating in  
3 wks.

- Will great  
casing out  
of shaft

- Will install  
#2 shaft

- Will reduce  
#1

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present, the major concentration is on finish trades such as mechanical and electrical, vinyl floor covering, plumbing fixtures, and other such items. Most doors are hung, and hardware will be completed once the locking systems are brought to the job. Present plans are to ship all electrical security equipment to the security contractor June 28, 1985 (working day 637). This equipment will be bench tested, and then sent to the job for installation. Bench testing is estimated to take from 5 - 10 working days so security equipment should be on the job sometime in mid or late July, 1985.

Moved back  
our work

Level #4 - Desired late finish September 26, 1985 (working day 699)

Currently the fourth floor is meeting targets between early and late starts and finishes. Work there is slightly behind similar work being done at the third level. Thus, most concentration is on the finish trades such as acoustic, vinyl floor covering, plumbing fixtures, and work in patient rooms. With present progress, it does not appear there will be any difficulty in meeting the desired late finish of September 26, 1985 (working day 699).

### General

The project is now moving into final stages of work, and I strongly recommend that plans be made now to how the facility is to be turned over to the state for its work needed to make the facility operational. The desire here is to finish the floors in a sequence from 3 to 4 and down and out on 2 with 1 being completed concurrently. Thus, it should be possible to close off the third and fourth levels to construction traffic by early fall, 1985. This should permit a concentration of effort on the first and second levels particularly the second level.

It is still the intent to hold a perimeter security activation date of August 15, 1985 (working day 678) in the security transition process. This is the point in time at which prisoners will be routed through the new security area and when the removal of the 8 x 8 existing door and frame can be started. No major work has been done on completing the perimeter fence since the previous monitoring, but it is expected that this work will be restarted soon.

Hold

I shall be in touch with Mr. McCamb soon to set the next planning and monitoring session. Meanwhile, we have distributed Issue #5 of the network model, dated March 22, 1985 to all parties concerned. It should be noted that on

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

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sheet 49 there are some minor errors in dates at nodes 671,  
672 at the time restraint to dry plaster surface and nodes  
666, 677, and 678. These dates are generally May dates rather  
than March dates. Please, if you will, make the revisions to  
your copy.

Ralph J. Stephenson, P.E.

RJS:spg  
To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank

August 3, 1985

Subject: Monitoring Report #16  
Health Care Unit  
State Prison of Southern Michigan  
Jackson, Michigan

Project: 84:05

State of Michigan project no: #110-47-3199-247

Date of Monitoring: July 24, 1985 (working day 654)

Date of contract: Approximately November 15, 1983

Time of construction: 27 months

Contract completion date: Approximately February 15, 1985

Monitored from Issue #5 dated March 22, 1985 (working day 568)

Actions taken:

- Inspected project
- Reviewed current job status with owner representative and architect/engineer
- Evaluated current job status

General Summary

At level #1 and level #2, the project has slipped over the past month. It now lags four to six working days at the lower level over a target late finish of August 13, 1985 (working day 668), and by a projected 36 working days over a target completion of October 23, 1985 (working day 719) at level #2. These slippages will probably move the total completion date of the project into late December, 1985 or early January, 1986.

Progress at the third and fourth levels is being maintained to meet the target completion dates of August 27, 1985 (working day 679) for level #3 and September 25, 1985 (working day 699) for level #4.

Projected completion dates are still somewhat ahead of the contract completion date although the differential grows

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

shorter each month. It is strongly recommended that careful attention be given the project, particularly at the 2nd level where difficulty has been encountered in maintaining progress on hanging board and plastering.

The matter of punch out procedures and locking up areas to construction traffic particularly at 3 and 4 will soon be a matter for discussion. I suggest these procedures be addressed now so as we near the end of the project a clear pattern of action for turning over the building is established.

A brief review of the status at each of the levels is given below:

Level #1 - Desired late finish date August 13, 1985 p.m.  
(working day 669)

The current lag at level #1 is from four to six working days in general work. However, this is not as yet critical since there is considerable float time on the floor. However, of importance is the continuing difficulty in getting the elevator casing shaft sunk and cleaning up the area so that work near the elevators can be finished. The #2 elevator casing is ready to receive the plunger; however, it will be held off until the grouting is completed. The elevator #1 casing will be redriven. Present plans are to have an elevator operating in about three weeks.

Level #2 - Desired late finish October 23, 1985 p.m. (working day 719)

Level #2 work is now being concentrated on installation of remaining drywall and plastering at partitions. The projected lag now is about 36 working days which is an increase in the lag of from 14 to 16 working days over the previous monitoring. The slippage is serious and now has moved the projected completion date of the floor back to the end of December, 1985. This, of course, is nearing the target contract completion date and thus, is of concern, particularly since cleaning up, punching out, and getting the security equipment in operation is in activity that takes considerable time when most other major work has been completed.

Estimates for completion of plastering and drying show these operations should be finished by about August 14, 1985 with completion of the floor about the end of December, 1985.

Level #3 - Desired late finish August 27, 1985 p.m. (working day 679)

Work at the third level is now moving into its final stages with hookup of case work and mill work in progress, painting

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being completed, and miscellaneous trim items being installed. As noted above, plans should be made to start moving out of these upper areas when they are completed if at all possible to avoid post-finish damage from construction traffic. Thus, plans for the punching out of the project would be well to be made early so that all involved know what is expected.

Level #4 - Desired late finish September 25, 1985 p.m.  
(working day 699)

Level #4 interior work is slightly behind level #3 interior work and present indications are it will be able to meet its target late finish date. Here too an early finish of the area will pose problems of damage to finish installation. Steps should be taken very early to minimize this potential problem.

#### Security transition

It is presently the intent to hold a perimeter security activation date of August 15, 1985 (working day 670). This represents the point where perimeter security is in place and prisoner traffic is routed through the new security area. There has been very little progress over the past month on installation of the additional security fence required for this transition, and it would be well for those concerned to address this matter at an early date if it is the actual intent to make the transition on August 15, 1985 (working day 670). The network model for security transition has been drafted on sheet #16, Issue #5 dated March 22, 1985 (working day 568). It will be used as our model unless substantial changes are imposed upon it. Once the date for the security transition has been finally set, I shall date the network and issue it for field use.

#### General

Overall, the project has slipped since our previous monitoring and the projected completion date made later. Elevator work still is a disruption to lower level work as well as some areas at upper levels. These matter should be addressed so as to minimize lags and delays in closing out the job and turning it over to the owner. The next monitoring session is presently set for late August, 1985. I shall be in touch with Mr. McComb and the field staff to confirm a date.

Ralph J. Stephenson, P.E.

RJS:sps  
To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank

October 2, 1985

**Subject: Monitoring Report #17**  
**Health Care Unit**  
**State Prison of Southern Michigan**  
**Jackson, Michigan**

**Project: 84:05**

**State of Michigan project no: #110-47-3199-247**

**Date of Monitoring: September 27, 1985 (working day 700)**

**Date of contract award: Approximately November 15, 1983**

**Time of construction: 27 months**

**Contract completion date: Approximately Feb. 15, 1986**

**Monitored from Issue #5 dated March 22, 1985 (working day 568)**

**Actions taken:**

- Inspected project
- Reviewed current job status with owner representative and architect/engineer representative
- Evaluated current job status

**A brief review of the status of the project at each level is given below:**

**Level #1 - Desired late finish date August 13, 1985 p.m.  
(working day 669)**

**This area is still being used as a fill in work area for the total project. A major delay at level #1 is the inability to complete installation of the casing at the elevator shafts. The southernmost elevator casing is still being drilled, and there is no authentic word on when it will be completed. Elevator #2 and #3 are operational, and the dumbwaiter installation is complete. A clogged floor drain is the latest of elevator related problems, and probably a portion of the floor of the equipment room will have to be broken out in order to correct the difficulty. There is no authentic word when elevator work will be complete, but it is imperative that**



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

it be brought to a resolution in the near future. The remainder of the project is rapidly being completed and the elevator work is now showing potential for delaying the entire project beyond a desirable ending point.

Since completion of the first level depends upon the elevator shaft casing being completed, an accurate projection of a completion date cannot be made at that level presently.

Level #2 - Desired late finish October 23, 1985 p.m. (working day 719)

The lag at level #2 ranges between 5 and 15 working days on finish trades. However, the logic of needed activities for completion makes it appear that there is about 30 working days yet to complete this level. The lags are primarily in vinyl wall covering, ceilings, case work, trim and other finish items. In addition, there are several doors that had to be returned for remanufacturing. No current information is available on when these will be back on the job site. Thus, presently it appears that we can expect the area to be completed in mid or late November, 1985. There is a possibility that completion could be achieved earlier, but at present it would be well with the current elevator delay on the project to assume the November, 1985 range.

Level #3 - Desired late finish August 27, 1985 (working day 679)

Major activity at level #3 is substantially complete with the only work remaining being miscellaneous architectural, mechanical, and electrical trim and some finish painting. There still is some glass to install. It is presently expected that all glass will be on the job by October 10, 1985 (working day 709).

Level #4 - Desired late finish September 25, 1985 p.m. (working day 699)

Work at level #4 is from 10 to 15 working days from being totally complete, and there does not appear to be any major difficulty in bringing it to an ending point concurrent with level #1 and #2 installation. At all floors including level #4 the delays in elevator casing installation have caused dysfunctions at the floor work and made it difficult to properly sequence out the finish trades.

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Security transition - Monitored from sheet #16, Issue #5 dated  
March 22, 1985 (working day 568)

Prisoner traffic has now been routed through the new security as of September 9, 1985 (working day 686). The existing temporary north fence has been removed, and construction of the new road is under way. The 8' x 8' door frame will be removed starting about October 7, 1985. Work on the security transition is moving relatively well and should be able to be finished by completion of the main building project.

General

Overall, the apparent construction completion for the project is now in mid or late November, 1985. This is based upon being able to complete installation of the elevator shaft and the elevator itself since this is presently the disruptive factor on the project. Also of importance is remanufacture of the doors and completion of security work at each floor. Due to the fact that there still remains some probability that delays could continue on the project, I suggest that we again plan to monitor the project in mid or late October, 1985. I shall be in touch with Mr. McComb to set the date of the next project monitoring.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Robert McComb  
cc: Mr. David Power  
Mr. Richard Katz  
Mr. Dennis Anderson  
Mr. Dennis Boutwell  
Mr. Fred Frank