

93:61

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
October 29, 1993

Subject: Monitoring Report #01
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Tuesday, October 19, 1993 (wd 715)

Monitored from: Sheet #SM1, issue #1, dated October 18, 1993 (wd 714)

Those attending:

- Dr. Charles Donnelley
- Sharon Johnson - MCC - Dean of Business Affairs
- Mike Persich - MCC - Acting Associate Dean for Technology
- Margaret Brainard - MCC - Acting Associate Dean for Science
- Jim Tomblinson - THA - Principal in charge of project
- Gerald Harburn - THA - Principal in charge of MCC program
- Sheri Ananich - THA - Project Manager
- Ralph J. Stephenson - Consultant

Some of those attending were in the meeting part time only.

Actions taken:

- Made general review of entire Mott Community College planning program.
- Discussed needs of the technology program in the renovated Gorman Building with Mr. Persich.
- Discussed needs of the science program in the renovated Gorman Building with Ms. Brainard.
- Discussed procedural steps to be taken in writing the renovation program for the Gorman Building.
- Reviewed possible alternative location sites for temporarily displaced functions as Gorman Building renovation proceeds.
- Reviewed abatement work needed in the Gorman Building.
- Discussed relative difficulty in temporarily relocating various functions of the current Gorman Building occupants.
- Discussed State of Michigan review and approval requirements for Gorman Building program and design documents.

Summary:

This meeting was to review the current status of the master planning program for Mott Community College, and to begin detailed planning of the Gorman Building renovation project.

Our early meeting discussions were about ongoing implementation of the long range program and about the priorities currently assigned to the various projects identified in the program. When Mr. Persich arrived the discussion shifted to the Gorman Building renovation. The activities under Mr. Persich's management include:

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- Basic machinery
- Computer numerical control
- Fluid power
- Metallurgy

We spent considerable time discussing how the critical functions in Mr. Persich's departments might operate if the Gorman Building had to be closed down totally for the renovation. Our summary analysis indicated that it would be of help to have a complete inventory of space available for various moves by technology as well as science. As the discussions proceeded a preliminary list was started that contained possible areas to which Gorman Building activities could be temporarily moved. These included:

- Central High School
- Trade Tech Building
- GMI
- U of M Flint
- Baker
- Flint public schools
- Private industrial facilities
- Jordan College
- Art Center
- Sarvis Center
- Planetarium
- CDLC
- Various local hospital faculties

All of these locations may not be feasible alternatives. However we found that some of those not feasible triggered thinking about others that might be. I recommend that alternative location designation be given high priority attention during the program writing phase.

The abatement work to be done at Gorman will probably require full vacation of the building, and renovation work is presently being planned to proceed immediately after abatement is complete.

When Ms. Brainard joined us we discussed the operation and temporary relocation of departments under her management. These include

- Engineering
- Physics
- Geology
- Mathematics
- Chemistry
- Astronomy
- Photography
- Museum

The program for the Gorman renovation is being written by an educational program consultant in

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conjunction with the College staff and THA. His work will begin in meetings with the faculty on October 27 and 28, 1993 and will continue through submission of recommendations by November 19, 1993. At that time a new budget will be prepared based on the program statements. In conjunction with this work the final draft of the justification statement will be written and the architectural and engineering services proposal completed.

This material will be assembled into a program analysis package and submitted to the Department of Management and Budget for their review and approval.

From this approval the design process moves through schematic design, preliminary design, and final design, all with the needed reviews and approvals from the various agencies involved. Upon completion of the final design package, the documents will be issued for construction proposals from contractors.

The preliminary overview timetable for the project is as follows:

- 06/24/94 - Spring term ends.
- 06/29/94 - Summer term starts.
- 08/19/94 - Summer term ends.
- 09/01/94 - Abatement begins.
- 11/01/94 - Abatement complete.
- 11/14/94 - Building renovation begins.
- 09/01/95 - Project complete.

This timetable was derived from the initial network model, sheet #SM1, issue #1, dated October 18, 1993 (wd 714). The network was prepared in our meeting and reviewed carefully by all present. Revisions were made to the network model in the analysis discussion following.

Subsequently these revisions were incorporated in the issue #2 network model, sheet #SM1, dated October 25, 1993 (wd 719). A copy of the issue #1 network model was distributed at the meeting. The updated network model, sheet #SM1, issue #2 is enclosed with this report. It has been left in single sheet form to expedite copying and distribution.

Also included with this report is a translation of the issue #2 network model into a bar chart format showing early starts and finishes of each activity.

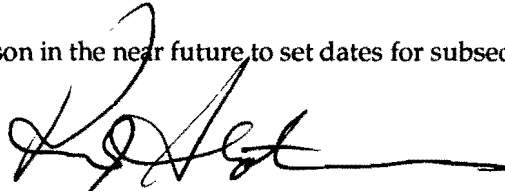
Due to the press of time and lack of information it was not possible to incorporate the detailed abatement plan in the summary network model. It has however, been shown as a single activity extending from September 1, 1994 (wd 937) through November 1, 1994 (wd 960) in the issue #2 network model.

The meeting notes taken during the meeting were distributed to those at the session. I have made some minor revisions to these notes and an edited copy is attached to this report. The notes contain preliminary laundry lists for abatement and building work.

This report is being sent to Mr. Gerald Harburn, the THA principal in charge of the Mott Community College program. Further distribution will be by him.

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Consulting Engineer
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I shall be in touch with Mr. Harburn and Mr. Tomblinson in the near future to set dates for subsequent planning and monitoring of the project.

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Consulting Engineer

August 24, 1995

Subject: Monitoring Report #02 - Construction
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Thursday, August 24, 1995 (wd 675)

Key Dates:

- May 17, 1995 (w 606) - date of contract (to be confirmed)
- December 6, 1995 pm (wd 748) - completion of phase 1
- July 25, 1996 pm (wd 910) - completion of phase 2
- September 1, 1996 pm (wd 936) - full completion of entire project.

Monitored from: Christman Phase One network - Issue #4 - dated July 24, 1995 (wd 652) sheets 1A, 1B, 2A, 2B, 3A and 3B

Those attending:

- Jim Tomblinson - THA - Principle
- Ron Korzecke - THA - Field representative
- Jennifer Gillespie - Christman - project engineer - Lansing
- Phil Frederick - Christman - on-site superintendent
- Dan Rooney - Christman - project engineer - Lansing
- Ralph J. Stephenson - consultant

Some attended portions of the meeting only.

Actions taken:

- Reviewed issue #4 network model, dated July 24, 1995 (wd 652) with Jennifer Gillespie, Phil Frederick, and Dan Rooney.
- Inspected project with Christman project staff.
- Evaluated project progress.
- Discussed future planning efforts with Jennifer Gillespie and Dan Rooney.
- Reviewed project status with Jim Tomblinson and Ron Korzecke.

Summary:

Job progress has been fair over the past month except where abatement work has affected trades

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following abatement. Apparently the contractor found that asbestos had infiltrated the masonry block hollows and additional abatement was required. The delay is estimated at about two weeks. Details of the abatement and the additional work is contained in Bulletin #1.

At the third floor the current lag, including that caused by the additional abatement, is about 17 working days behind early starts and early finishes. The project was not monitored against late starts and late finishes since accurate late start, late finish dates are not currently available. It is the intent of Christman to recapture as much of the lag as possible with the help of their subcontractors and to maintain a completion of the total phase one of the pm of December 6, 1995 (wd 748).

Jennifer Gillespie and Dan Rooney will work together to update the network and obtain valid late starts and finishes for the next working issue of the plan and schedule. They will send the updated network model to me for review and comments prior to the next monitoring meeting.

A brief summary of the current status of the work is given below. This information was obtained by an inspection of the project and in on-site discussions with the Christman project team. Activity descriptions are as shown on the network.

Activities complete as of 08/24/95 (wd 675).

Numbers preceding the task description are activity numbers in the network model.

- 0100 - Mobilize
- 0210 - Boiler shop drawings submitted and approved
- 0640 - Glazed tile shop drawings - submitted and approved
- 0950 - Chiller shop drawings - submitted and approved
- 0990 - Air handling unit shop drawings - submitted and approved
- 1000 - MCC panel shop drawing - submitted and approved
- 1200 - Primary transformer shop drawings - submitted and approved
- 0220 - Boiler fab and deliver - delivered 08/21/95 (wd 672)
- 0650 - Glazed tile fab and deliver
- 0105 - Install temporary barricades
- 0110 - Boiler room, tunnel and penthouse abatement
- 0120 - 3rd floor abatement
- 0160 - 3rd floor owner ffe removal and selected masonry demo
- 0170 - Complete boiler room demo - complete per contract documents
- 0180 - 3rd floor electrical shutoff
- 0340 - 2nd floor owner ffe removal and selected masonry demo
- 0360 - 1st floor electrical disconnect
- 0380 - 2nd floor electrical disconnect
- 0300 - 1st floor owner ffe removal and selected masonry demo
- 0660 - 3rd floor selective demo after abatement
- 0760 - Phase 1 lab casework shop drawings
- 0130 - 2nd floor abatement
- 0670 - 2nd floor selective demo after abatement

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Activities in work as of 08/24/95 (wd 675) and status

Numbers preceding the task description are activity numbers in the network model.

Third floor

- 0200 - Tooth in 3rd floor masonry openings - 90% complete
- 0250 - Infill 3rd floor masonry glazed tile - 60% complete
- 0690 - Install 3rd floor hollow metal frames - 80 % complete
- 0320 - Demo and reinstall 3rd floor windows - just starting
- 0240 - 3rd floor mechanical and duct rough in - 70% complete
- 0310 - 3rd floor sprinkler system installation - just starting
- 0370 - 3rd floor electrical rough in - 90% complete

Second floor

- 0420 - 2nd floor mechanical and duct rough in - just started
- 0430 - 2nd floor sprinkler system installation - just started
- 0400 - Tooth in 2nd floor masonry openings - 30% complete
- 0390 - 2nd floor electrical rough in - 30% complete
- 0150 - Install 2nd floor hollow metal frames - 80% complete

First floor

- 0230 - Install boiler - set on 8/21/95 (wd 672)
- 0140 - 1st floor abatement - 80% complete - to be completed by pm 08/30/95 (wd 450).
- 0450 - 1st floor electrical rough in - 25% complete

Procurement status as of 08/24/95

- 0930 - Air handling unit fab and deliver - hold delivery of 09/18/95 (wd 691)
- 1300 - Primary transformer fab and deliver - hold delivery at 10/12/95 (wd 709)
- 1100 - MCC panels fab and deliver - hold delivery at 09/21/95 (wd 694)
- 0940 - Chiller fab and deliver - hold delivery date at 09/14/95 (wd 689)
- 0770 - Phase one lab casework fab and deliver - hold current delivery at 10/13/95 (wd 710)
- Sprinkler drawings - must be resubmitted with calculations.
- Light fixtures - available
- Fume hoods - to be checked
- Aluminum entrance - available
- Door hardware - available
- 10/02/95 (wd 701) - Revolving dark room door delivery
- 10/02/95 (wd 701) - Photo lab casework delivery
- 10/12/95 (wd 709) - Primary transformer delivery
- 10/13/95 (wd 710) - Wood laboratory casework delivery
- 12/01/95 (wd 744) - Class room furniture delivery
- 05/01/96 (wd 850) - Elevator delivery

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Trade contract expiration dates from Mrs. Gillespie are as follows:

05/01/96 - Laborers
05/01/96 - Pipe fitters
06/01/96 - Asbestos workers
07/15/96 - Carpenters
04/01/97 - Sprinkler fitters
05/01/97 - Masons
05/01/97 - Sheet metal workers
06/01/97 - Electricians

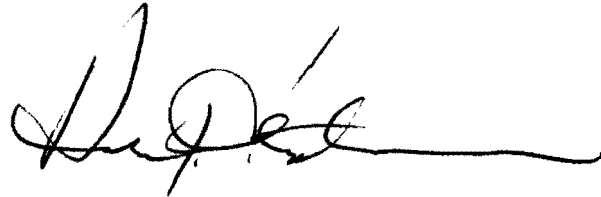
Laborers

Note that several of the network actions fall within the contract expiration dates. Care will have to be taken to track labor negotiations to help insure that project work is managed to reduce the probability of work stoppages on the project.

I gave Mrs. Gillespie and Mr. Rooney my monitored copy of the network model showing the status of the project as of August 24, 1995 (wd 675). They will update the current network to issue #5 using the information from the monitored network and will make a careful check on the logic to provide authentic late starts and late finishes. They will mail me copies of the updated network for my review as soon as it is completed.

I also gave Mrs. Gillespie a draft copy of this report for use in the construction progress meeting of August 24, 1995. I shall be in touch with Mr. Tomblinson, and with Mrs. Gillespie and Mr. Rooney to set the next date for planning and monitoring the project.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mrs. Gillespie at Christman. They will distribute the report as required.



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Consulting Engineer

October 11, 1995

Subject: Monitoring Report #03 - Construction
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: ~~Thursday, August 24, 1995 (wd 675)~~
Thursday, September 28, 1995 (wd 675)

Key Dates:

- May 17, 1995 (w 606) - date of contract (to be confirmed)
- December 6, 1995 pm (wd 748) - completion of phase 1 (to be confirmed)
- July 25, 1996 pm (wd 910) - completion of phase 2
- September 1, 1996 pm (wd 936) - full completion of entire project.

Monitored from: Christman Phase One networks - Issue #5a - dated September 27, 1995 (wd 698)

Those attending monitoring session:

- Phil Frederick - Christman - on-site superintendent
- Dan Rooney - Christman - project engineer
- Jim Tomblinson - THA - Principle
- Ralph J. Stephenson - consultant

Some attended portions of the meeting only.

Actions taken:

- Inspected project with Christman project staff.
- Reviewed issue #5 and #5a network models, dated September 27, 1995 (wd 698) with Phil Frederick, and Dan Rooney - dates of networks are approximate.
- Evaluated project progress.
- Discussed future planning efforts with Mr. Rooney.
- Reviewed project status with Mr. Tomblinson.

Summary:

Project progress over the past month has been good. Lags measured against the issue #5a network model, dated approximately September 27, 1995 (wd 698) are as follows:

As of September 27, 1995 (wd 698)

- Third floor - Approximately 10 working days
- Second floor - Approximately 3 working days
- First floor - Approximately 3 working days

Lags are measured against the following target completion dates:

- Third floor - pm November 20, 1995 (wd 737)

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- Second floor - pm December 7, 1995 (wd 749)
- First floor - pm December 18, 1995 (wd 756)

These dates are to be confirmed since there have been some delays due to unexpected abatement encountered during demolition work at the floors.

Mr. Rooney has updated the network models and now has a work plan that apparently meets the needs of the project. He is presently putting this into final form and will issue it when complete. In the interim both he and Mr. Frederick are working to the issue 5a plan of action upon which this monitoring report is based.

Below is a brief summary of the status of each major area of the building.

Third Floor - target completion date - pm November 20, 1995 (wd 737)

Rough interior work is substantially complete and painting was about to start. The issue #5a target for the late start of painting was September 14, 1995 (wd 689). Thus the largest projected lag at the floor is currently 10 working days. Masonry wall work at toilet rooms lags late finishes by about 6 working days. Other work is generally meeting late start and finish target dates.

Second Floor - target completion date - pm December 7, 1995 (wd 749)

Most rough interior work at the second floor is complete and areas are being readied for a start of painting on October 12, 1995 (wd 709) or sooner. The projected lag is 3 working days over the planned late start of October 9, 1995 (wd 706). It is possible that as areas open up for finish trades such as painting, work will proceed concurrently in two or more locations. This could help bring the project back in line with desired completion dates.

First Floor - target completion date - pm December 18, 1995 (wd 756)

Rough interior masonry, mechanical, and electrical work is proceeding well. Fire protection piping has just started as of September 27, 1995 (wd 698). Sprinkler work was due to begin no later than September 22, 1995 (wd 695). The current lag is about 3 working days over late start date.

It is important that work at the first floor be kept on schedule since the floor has an early and late desired finish date of the pm of December 18, 1995 (wd 756).

Exterior Close In

Most exterior windows have been installed and glazed. Currently the main effort is on installing the new curtain wall at the stair wells. This work is about 50% complete as of September 27, 1995 (wd 698).

Mechanical and Electrical Procurement & Installation

Boilers are currently being installed and connected. According to Mr. Frederick air handling units are available and being delivered. The chiller has been set at the roof. Primary transformation equipment

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delivery and installation may be deferred until phase two of the project since an electrical changeover will disrupt building service and it may be best to complete installation during the college's spring break. Motor control centers are currently arriving on the project and some are installed and being hooked up.

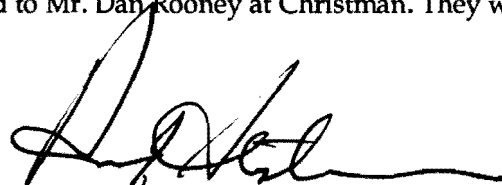
Most major mechanical and electrical equipment work is currently meeting targets between early and late starts and finishes.

Summary

The project is in fair to good condition but still lags the current target completion date of December 20, 1995 (wd 758) by 3 to 5 working days. Mr. Rooney is presently updating the network model in accordance with our meeting of September 27, 1995 (wd 698). When the updating is completed he will send copies to Mr. Tomblinson at THA and to me for our review and use.

The next monitoring session is tentatively set for Friday, October 27, 1995 (wd 720). At this meeting I shall plan to review the updated networks for both phase one and phase two.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will further distribute the information as required.



Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer

November 5, 1995

Subject: Monitoring Report #04 - Construction - Phase 1
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Thursday, October 26, 1995 (wd 719)

Key Dates:

- May 17, 1995 (w 606) - date of contract (to be confirmed)
- December 1, 1995 (wd 745) - desired completion of phase 1 - 3rd floor
- December 7, 1995 (wd 749) - desired completion of phase 1 - 2nd floor
- December 15, 1995 pm (wd 748) - desired completion of phase 1 - 1st floor
- July 25, 1996 pm (wd 910) - completion of phase 2
- September 1, 1996 pm (wd 936) - full completion of entire project.

Monitored from: Christman phase one network - Issue #5a - dated September 27, 1995 (wd 698)

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Ron Korzecke - THA - field inspector
- Jeneane Wise - Christman - project coordinator
- Phil Frederick - Christman - on-site superintendent
- Dan Rooney - Christman - project engineer
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Actions taken:

- Inspected project with Christman project staff.
- Reviewed issue #5a network model, dated September 27, 1995 (wd 698) with Phil Frederick, and Dan Rooney.
- Evaluated and discussed project progress with Mr. Frederick, Ms. Wise, and Mr. Rooney
- Reviewed project status with Mr. Tomblinson and Mr. Korzecke.

Note: The date of the project inspection for monitoring report #3 was shown in that report as Thursday, August 24, 1995 (wd 675). The date of the monitoring was actually Thursday, September 28, 1995 (wd 699). Would you please make this correction to your monitoring report #3.

Summary:

Over the past month project lags measured against the issue #5a network model have increased, and I

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Consulting Engineer

November 5, 1995

have recommended to the project team that they consider updating the current issue #5a model to reflect the new target dates that have been decided on in recent meetings. The report below measures current and projected lags on the job against completion targets that were set in the issue #5a network model dated September 2, 1995 (wd 698). These dates were as follows:

- Third floor - pm November 20, 1995 (wd 737)
- Second floor - pm December 7, 1995 (wd 749)
- First floor - pm December 18, 1995 (wd 756)

As of October 26, 1995 (wd 721) working day lags measured against late starts and late finishes shown in issue #5 dates are as follows:

- Third floor - 14 to 17 working days
- Second floor - Approximately 16 working days
- First floor - Approximately 21 working days

Mr. Rooney mentioned that the painters picketed the project on October 5, 1995 (wd 704).

Below is a brief summary of the status of each major area of the building.

Third Floor - issue #5a target completion - pm November 20, 1995 (wd 737) - current desired completion date - December 1, 1995 (wd 745).

Installation of ceiling grid, light fixtures, and grills and diffusers is in work and currently lags target late starts and late finishes by 3 to 11 days. At major ceiling areas the status of the floor is best measured by the proposed start of laboratory casework due to begin on October 23, 1995 (wd 716). As of October 26, 1995 (wd 719) casework is to be delivered on November 3, 1995 (wd 725). This gives a projected lag of 9 working days in this sequence of work if the work begins immediately upon receipt of lab equipment.

At the toilet rooms, masonry is substantially complete, hard tile wall installation is well along, and some ceiling grid is installed. The lag at the toilet rooms is about 14 working days. This is a very critical lag since much of the toilet room work in this phase of construction will now have to proceed concurrently on all three floors.

Corridor work is proceeding well and is currently meeting dates between late starts and late finished. Hard ceiling drops and light fixtures in these drops is complete and acoustic ceiling installation is in work.

Considering the lag at the third floor to be 14 working days measured against a completion target of the pm of November 20, 1995 (wd 736), the projected completion date is the pm of December 8, 1995 (wd 750). The current desired completion date is December 1, 1995 (wd 745).

Second Floor - issue #5a target completion - pm December 7, 1995 (wd 749) - current desired completion date - December 7, 1995 (wd 749).

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Consulting Engineer

November 5, 1995

Second floor room ceiling grid will begin on November 3, 1995 (wd 725). In the issue #5a network model ceiling grid was due to start on October 12, 1995 (wd day 709). This gives a projected lag of about 16 working days. Toilet room ceiling grid was due to start on October 19, 1995 (wd 714) and currently lags the issue #5a network by about 7 working days. Corridor ceiling work at the 2nd floor is currently meeting or is ahead of late starts and finishes.

Considering the lag at the 2nd floor to be 16 working days measured against a completion target for the floor of the pm of December 7, 1995 (wd 749), the projected completion date is the pm of January 2, 1996 (wd 765). The current desired completion date by the project team is December 7, 1995 (wd 749)

First Floor - issue #5a target completion - pm December 18, 1995 (wd 756) - current desired completion date - December 15, 1995 (wd 755).

Rough interior work is in progress at the 1st floor. Painting is planned to be started on November 20, 1995 (wd 736). Painting was due to begin by the issue #5a network model at a late start of October 20, 1995 (wd 715). This gives a projected lag of 21 working days. Toilet room masonry will begin on October 30, 1995 (wd 721). It was due to begin on October 4, 1995 (wd 703). This is a lag of 15 to 18 working days over late starts and late finishes. Other 1st floor finish work depends to a large extent on painting and masonry and can be considered to have similar lags over the issue #5a network model.

Considering the lag at the 1st floor to be 21 working days measured against a completion target of the pm of December 18, 1995 (wd 756), the projected completion date is the pm of January 18, 1996 (wd 777). The current desired completion date by the project team is December 15, 1995 (wd 755)

Exterior Close In

Most major close in operations are complete and the building is secure and well protected against weather which might affect installation of interior finishes.

Mechanical and Electrical Installation

Most mechanical and electrical equipment installation appears to be in good condition. Primary transformer installation will be deferred until phase two of the project since an earlier electrical changeover would disrupt building services at a critical part of the school year.

Summary

The lag over the issue #5a network model has increased considerably since the previous monitoring on September 28, 1995 (wd 699). This increase was discussed in detail with Mr. Frederickson, Mr. Rooney, Ms. Wise, Mr. Tomblinson, and Mr. Korzecke at the monitoring meeting. All agreed that the network model logic and task duration should be reviewed and revised.

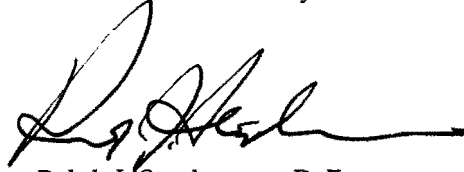
There appears to be a need for concurrent trade work, particularly hard tile at the toilet rooms that is required to improve the probability of completing the phase one work by the desired targets. Mr. Rooney and Mr. Frederickson will review the issue #5a network and determine and make the revisions

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer

Novrmber 5, 1995

needed.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required

A handwritten signature in black ink, appearing to read 'R. J. Stephenson', with a long horizontal flourish extending to the right.

Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer

December 3, 1995

Subject: Monitoring Report #05 - Construction - Phase 1
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Thursday, November 30, 1995 (wd 743)

Key Dates:

- May 17, 1995 (wd 606) - date of contract (to be confirmed)
- December 1, 1995 am (wd 744) - planned completion of 3rd floor - issue #7a
- December 7, 1995 am (wd 748) - planned completion of 2nd floor minus toilet rooms - issue #7a
- December 15, 1995 am (wd 754) - planned completion of 2nd floor toilet rooms - issue #7a
- December 18, 1995 am (wd 755) - planned completion of 1st floor minus toilet rooms - issue #7a
- December 29, 1995 pm (wd 764) - planned completion of 1st floor toilet rooms - issue #7a
- January 2, 1996 am (wd 764) - desired start of work on phase 2
- July 25, 1996 pm (wd 910) - completion of phase 2
- September 1, 1996 pm (wd 936) - full completion of entire project.

Monitored from: Christman phase one network - Issue #7a - dated November 17, 1995 (wd 735)

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Jeneane Wise - Christman - project coordinator
- Phil Frederick - Christman - on-site superintendent
- Dan Rooney - Christman - project engineer
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Actions taken:

- Inspected project with Christman project staff.
- Reviewed issue #7a network model, dated November 17, 1995 (wd 735) with Phil Frederick, and Dan Rooney.
- Evaluated and discussed project progress with Mr. Frederick, Ms. Wise, and Mr. Rooney
- Reviewed project status with Mr. Tomblinson.

Summary:

Subsequent to our monitoring of Thursday, October 26, 1995 (wd 719), Mr. Rooney of Christman updated the network models for each of the three floors being remodeled in Phase 1 of the project. These were distributed as issue #7a dated November 17, 1995 (wd 735), and are the networks from which the project

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer

December 3, 1995

was evaluated at this monitoring inspection.

Completion dates desired and shown as target dates in the issue #7a network model are as follows:

- Third floor am December 1, 1995 (wd 744)
- Second floor am December 7, 1995 (wd 748) for main floor work
 am December 15, 1995 (wd 754) for toilet room work
- First floor am December 18, 1995 (wd 755) for main floor work
 am January 2, 1996 (wd 764) for toilet room work

These are the dates against which the three floors are measured in this report.

Below is a brief summary of the status of each major area of the building.

Third Floor - issue #7a target completion - am December 1, 1995 (wd 744)

Toilet room work has moved fairly well over the past month and most finishes are in place except for the ceiling acoustic tile and the toilet partitions. Toilet partitions will be on the job on December 15, 1995 (wd 754) according to Mr. Rooney. It will require about a week to complete toilet room work after the partitions arrive. This puts completion of the toilet rooms at the third floor at about the pm of December 21, 1995 (wd 759).

In the main floor areas fume hoods have been late on the job and are expected to arrive November 30, 1995 or December 1, 1995. Christman will have tradesmen working on installation with adequate manpower to complete the work in 2 to 4 working days.

Another disruption has been the unsatisfactory appearance of the self leveling floor finish at the laboratories. Another floor covering product is being evaluated and a course of action is now being determined. This will probably impose a delay of 4 or 5 working days on the interior finishes and final setting the classroom furniture.

In addition the fire marshal is considering the need to install firestopping in the corridor walls at pipe penetrations. This work should be able to be done quickly once the decision is made by the fire marshal.

With prompt resolution of the floor covering and installation of the fume hoods and firestopping at the corridor, the main floor area should be completed by the pm of December 21, 1995 (wd 759). This date is now the target date for turnover to the owner for installation of their work. If work progress can be improved the turnover date may be slightly earlier.

Second Floor - issue #7a target completion - am December 7, 1995 (wd 748) for main floor work and am December 15, 1995 (wd 754) for toilet room work

Toilet room partitions will not be on the job until December 15, 1995 (wd 754) and this will delay completion of the toilet rooms for 4 or 5 working days after they arrive.

Main floor work is complete to a point where casework and floor covering work should be in active

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer

December 3, 1995

production the next two weeks. Projecting the completion date from the current position shows a completion of about December 20, 1995. It was decided to set the target for all work at the 2nd floor at the pm of December 20, 1995 (wd 758). This represents the point where the floor can be turned over to the college for the start of owner FFE work.

First Floor - issue #7a target completion - am December 18, 1995 (wd 755) for main floor work and pm December 29, 1995 (wd 764) for toilet room work

Toilet room work at the first floor has proceeded very slowly with masonry currently in work and nearly complete. Projecting this toilet room work to completion shows the rooms being complete about mid January, 1996. However Mr. Frederick and Mr. Rooney will try to compress this time and complete the toilet rooms by the am of January 2, 1996 (wd 764). Apparently the larger toilet rooms are not needed since other building toilet rooms are available to the limited population in the building over the Christmas break. This break extends from December 20, 1995 to January 8, 1996. Faculty will be back in school on January 3, 1996.

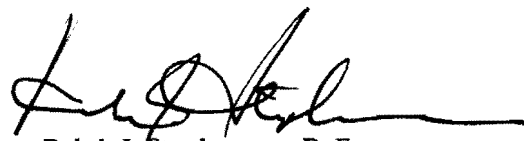
Main floor work at the first floor has also moved somewhat slower than anticipated and the projected end date for the areas other than the toilet rooms is now the am of December 27, 1995 (wd 761).

It should be noted that another folding partition has been added at the first floor and a submittal must be approved and the partition fabricated and delivered. No accurate information on this item was available at our meeting.

General:

At our meeting the project team discussed a desired starting date for beginning work on phase 2 of the project. They decided that a tentative date of the am of January 2, 1996 (wd 764) be established and adopted if the Mott Community College staff are in agreement.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required


Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
January 2, 1995

Subject: Monitoring Report #06 - Construction - Phase 1
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Thursday, December 28, 1995 (wd 762)

Key Dates:

- May 17, 1995 (wd 606) - date of contract
- December 1, 1995 am (wd 744) - planned completion of 3rd floor - issue #7a
- December 7, 1995 am (wd 748) - planned completion of 2nd floor minus toilet rooms - issue #7a
- December 15, 1995 am (wd 754) - planned completion of 2nd floor toilet rooms - issue #7a
- December 18, 1995 am (wd 755) - planned completion of 1st floor minus toilet rooms - issue #7a
- December 29, 1995 pm (wd 764) - planned completion of 1st floor toilet rooms - issue #7a
- January 2, 1996 am (wd 764) - desired start of work on phase 2
- January 3, 1996 am (wd 765) - college faculty report back to work
- January 8, 1996 am (wd 768) - classes begin
- July 25, 1996 pm (wd 910) - completion of phase 2
- September 1, 1996 pm (wd 936) - full completion of entire project.

Monitored from: Christman Phase I network - Issue #7a - dated November 17, 1995 (wd 735)

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Ron Korzecke - THA - construction coordinator
- Jeneane Wise - Christman - project coordinator
- Dan Rooney - Christman - project engineer
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Note: Mr. Phil Frederick has left the project and Mr. Rooney & Ms. Wise are currently and jointly managing office and field operation for the project.

Actions taken:

- Inspected project with Mr. Rooney and Ms. Wise
- Evaluated and discussed project progress with Ms. Wise, and Mr. Rooney
- Reviewed project status with Mr. Tomblinson and Mr. Korzecke

Summary:

Below is a brief summary of the status of each major area of the building.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
January 2, 1995

Third Floor - issue #7a target completion - am December 1, 1995 (wd 744)

The owner, the design team, and the contractors are preparing punch lists and cleaning up unfinished work at the third floor. Mr. Rooney and Ms. Wise have set the P.M. of December 29, 1995 (wd 764) as their punch list correction completion date. Floor finishes have been corrected by a joint action of the owner and the contractor, and firestopping is installed as the fire marshal desired.

There are still some items to be done on the third floor whose installation may carry over to later dates. These include:

- Installing high density storage units - These are to be delivered January 26, 1996 (wd 782). Meanwhile the college will use storage units from the Phase II area for temporary storage if agreeable to the owner.
- Painting convector grills - All wall convector grills at the wall convectors are to be painted the week of January 2, 1995. This should not materially interfere with move in operations.
- Installing high ceiling at stair #1 - Plans are to complete the high ceiling work at stair #1 by the evening of Wednesday, January 3, 1996 (wd 766). This is a critical operation and is being given a high level of attention.
- Replacement of expansion joint covers - To be done during Phase II work.
- Window treatment - Currently being checked to determine the status of window treatment procurement. No current information was available.

Mr. Rooney and Ms. Wise discussed these items in detail with Mr. Tomblinson and Mr. Korzecke at the monitoring session and a course of action for each was reviewed and decided upon.

Second Floor - issue #7a target completion - am December 7, 1995 (wd 748) for main floor work and am December 15, 1995 (wd 754) for toilet room work.

Mr. Rooney plans to have second floor punch list corrections completed by the am of January 2, 1996 (wd 764). Most bulk work is done and the owner move-in is underway. Some items yet to be done will carry over to later dates. These include:

- Painting convector grills - Same comments as for third floor.
- Replacement of expansion joint covers - Same comments as for third floor.
- Window treatment - Same comments as for third floor.

First Floor - issue #7a target completion - am December 18, 1995 (wd 755) for main floor work and pm December 29, 1995 (wd 764) for toilet room work

Present plans are to complete punch list corrections at the first floor by the pm of January 7, 1996 (wd 768). Current work is concentrated on toilet room and corridor finishes and on finishing classroom areas

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
January 2, 1995

ready for use.

Considerable discussion was held concerning plumbing test requirements that must be met to allow work to continue on the first floor toilet room plumbing while the upper floor toilet rooms are put into service. First floor work apparently will not interfere with the use of the second and third floor toilets.

Exhaust fans at toilet rooms must be checked to determine if they will be operative as move in is completed.

Summary

The current plan of work anticipates a start of Phase II third floor remodeling on January 2, 1996 (wd 764) and then proceeding down to the lower floors as in Phase I. Some minor work is presently in progress at Phase II areas and abatement is expected to begin as Phase I is completed and occupied.

Mr. Rooney and Ms. Wise will update and distribute their anticipated plan of work for Phase II in the next few days and will send me a copy direct. I plan to monitor the project again on Thursday, February 22, 1996 (wd 801). By this time a substantial amount of abatement work should be completed at the upper floors and remodeling should be well underway.

I appreciate the help of the project staff in monitoring the project over the last few months and wish all those working on the project a very happy and prosperous New Year.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required



Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
February 24, 1996

Subject: Monitoring Report #07 - Construction - Phase 2
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Thursday, February 22, 1996

Key Dates:

- May 17, 1995 (wd 606) - date of contract
- January 3, 1996 am (wd 765) - college faculty report back to work
- January 7, 1997 am - approximately - Phase 2 work begins
- January 8, 1996 am (wd 768) - classes begin
- June 14, 1996 pm (wd 882) - complete 3rd floor - phase 2
- July 10, 1996 pm (wd 899) - complete 2nd floor - phase 2
- July 25, 1996 pm (wd 910) - complete 1st floor - phase 2
- July 25, 1996 pm (wd 910) - substantially complete phase 2
- September 1, 1996 pm (wd 936) - complete entire project.

Monitored from: Christman phase two network - Issue #1 - dated February 1, 1996 (wd 786)

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Ron Korzecke - THA - construction coordinator
- Dan Rooney - Christman - project manager and superintendent
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Note: Mr. Rooney has been officially appointed superintendent of the project. He will carry out his joint duties as project manager and superintendent in conjunction with Ms. Jeneane Wise.

Actions taken:

- Inspected project with Mr. Rooney.
- Evaluated and discussed project progress with Mr. Rooney.
- Reviewed project status with Mr. Tomblinson, Mr. Korzecke and Mr. Rooney

Summary:

Work on phase 2 started about January 7, 1996 with abatement and demolition at the third floor. Phase 1 work was sufficiently complete to allow a relatively smooth occupancy of the phase 1 area by the start of school in early January, 1996. There still are some minor portions of phase 1 remaining to be completed but apparently these are not adversely affecting occupancy of the area.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
February 24, 1996

Below is a brief summary of phase 2 work status

Third Floor - issue #1 desired target completion - pm June 14, 1996 (wd 882)

Abatement at the third floor was completed on the pm of January 31, 1996 (wd 786). This freed up completion of demolition and installation of rough work. All major rough work at the third floor is currently meeting targets between desired early and late starts and finishes: Most demolition is complete, and installation of rough architectural, mechanical, electrical work is in progress. If work progress is maintained at the current level progress over the next few weeks the project should be able to meet the current plan of work.

Second Floor - issue #1 desired target completion - pm July 10, 1996 (wd 899)

Abatement at the second floor was completed on the issue #1 target date of the pm of February 21, 1996 (wd 801). Current work is focussed on completion of demolition, tooting in of frames in masonry walls, and soon, installation of rough architectural, mechanical, and electrical work.

All major work is meeting dates between early and late starts and finishes.

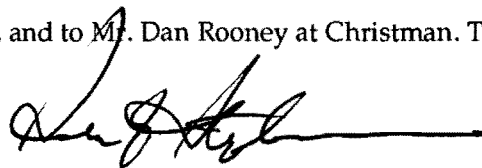
First Floor - issue 1 desired target completion - pm July 23, 1996 (wd 908)

Abatement at the first floor is set to begin the am of February 24, 1996 (wd 803). This is about two working days later than the desired date. However Mr. Rooney feels they can pick up the two days since the abatement work schedule is somewhat flexible. Currently abatement is due to be completed by the pm of March 14, 1996 (wd 816).

General

Mr. Tomblinson and Mr. Korzecke have requested Mr. Rooney to provide a report on strike potential in the Flint area, particularly in trades where expiration dates of present contracts fall prior to the project completion data.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required



Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
April 12, 1996

Subject: Monitoring Report #08 - Construction - Phase 2
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Friday, April 12, 1996 (wd 837)

Key Dates:

- May 17, 1995 (wd 606) - date of contract
- January 8, 1996 am (wd 768) - phase 2 work field work started
(Please note that in monitoring report #07 dated February 24, 1996 the start of phase 2 work was noted as January 7, 1997. It should have read January 8, 1996. Please make this correction on your copy.)
- June 14, 1996 pm (wd 882) - complete 3rd floor - phase 2
- July 10, 1996 pm (wd 899) - complete 2nd floor - phase 2
- July 23, 1996 pm (wd 908) - complete 1st floor - phase 2
- July 25, 1996 pm (wd 910) - substantially complete phase 2
- September 1, 1996 pm (wd 936) - complete entire project.

Monitored from: Christman phase two network - Issue #1 - dated February 1, 1996 (wd 786)

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Ron Korzecke - THA - construction coordinator
- Dan Rooney - Christman - project manager and superintendent
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Actions taken:

- Inspected project with Mr. Rooney.
- Evaluated and discussed project progress with Mr. Rooney.
- Reviewed project status with Mr. Tomblinson, Mr. Korzecke and Mr. Rooney

Summary:

Project work is being monitored from the issue #1 network models dated February 1, 1996 (wd 786) and prepared by Dan Rooney of Christman. I have reviewed these work plans and they currently provide a good set of guidelines for completion of the project within the contract requirements. As work proceeds the issue #1 networks may require updating. I shall discuss this process with Mr. Rooney as the need arises.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
April 12, 1996

As of the morning of Friday, April 12, 1996 (wd 837) project phase 2 work is moving well and generally meeting most major early and late start and finish dates. Interior work is moving down and out of the building from the third floor to the the second to the first. Procurement with some minor exceptions is proceeding well and conforming to current field needs.

Intermediate desired target dates have been set by Mr. Rooney and measurement of project progress is being made against these intermediate targets.

Below is a brief summary of phase 2 work status as of the A.M. of Friday, April 12, 1996 (wd 837)

Third Floor - issue #1 desired target completion - pm June 14, 1996 (wd 882)

All work at the third floor is currently meeting target dates between early and late starts and finishes. Ceiling grid is installed, ceiling light fixtures are substantially complete, and most ceiling grills, diffusers, and sprinkler heads are complete. The platform for the high density shelving is installed.

Delivery of third floor laboratory casework was scheduled for a late date of the P.M. of April 26, 1996 (wd 848). This date has been revised to the P.M. of May 13, 1996 (wd 859). However Mr. Rooney feels he can pick up the time lag by selective compression of times and some logic revision of tasks following installation of case work.

Second Floor - issue #1 desired target completion - pm July 10, 1996 (wd 899)

All work at the second floor is currently meeting target dates between early and late starts and finishes. Painting is substantially complete and ceiling grid installation is in work at the classrooms. Hallway ceiling grid is to be started on the A.M. of April 15, 1996 (wd 838). It was due to begin no later than June 11, 1996 (wd 878).

First Floor - issue 1 desired target completion - pm July 23, 1996 (wd 908)

Abatement at the first floor was completed the P.M. of April 3, 1996 (wd 831). Demolition work is substantially complete and work is underway on installation of masonry, and rough interior mechanical and electrical work. Masonry and fire protection work lag late target dates slightly. Mr. Rooney is currently reviewing the issue #1 network logic and feels he can regain this small lag in the near future by some realignment of the work sequence.

General

Mr. Rooney, in response to a request of Mr. Tomblinson and Mr. Korzecke, has provided a list of contract expiration dates for trades currently working on the project. These are tabulated below:

May 1, 1996 - Laborers
May 1, 1996 - Pipe fitters - mechanical - currently negotiating
June 1, 1996 - Asbestos workers
July 15, 1996 - Carpenters

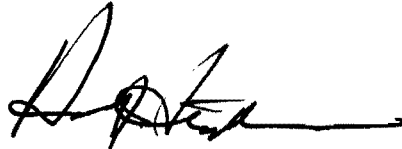
April 1, 1997 - Sprinkler fitters

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
April 12, 1996

May 1, 1997 - Masons
May 1, 1997 - Sheet metal workers
June 1, 1997 - Electricians

At present it does not appear that work affected by these expiration dates will seriously impact the project. Mr. Rooney is further reviewing the information to determine alternative plans of work should there be a possibility of a work stoppage.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required

A handwritten signature in black ink, appearing to read 'R. Stephenson', with a long horizontal flourish extending to the right.

Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
May 14, 1996

Subject: Monitoring Report #09 - Construction - Phase 2
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Date of Monitoring: Tuesday May 14, 1996 (wd 859)

Monitored from: Christman phase two network - Issue #1 - dated February 1, 1996 (wd 786), and
Issue #2 - dated May 14, 1996 (wd 859)

Key Dates:

Issue #1 dates

- May 17, 1995 (wd 606) - date of contract
- January 8, 1996 am (wd 768) - phase 2 work field work started
- June 14, 1996 pm (wd 882) - target completion of 3rd floor - phase 2
- July 10, 1996 pm (wd 899) - target completion of 2nd floor - phase 2
- July 23, 1996 pm (wd 908) - target completion of 1st floor - phase 2
- July 25, 1996 pm (wd 910) - contract date - substantially complete phase 2
- September 1, 1996 pm (wd 936) - contract date - complete entire project.

Issue #2 dates

- June 21, 1996 pm (wd 887) - target completion of 3rd floor - phase 2
 - July 5, 1996 pm (wd 897) - target completion of 2nd floor - phase 2
 - July 25, 1996 pm (wd 910) - target completion of 1st floor - phase 2
 - July 25, 1996 pm (wd 910) - contract date - substantially complete phase 2
 - September 1, 1996 pm (wd 936) - contract date - complete entire project.
- 51 working days remaining on project to substantial completion.

Those attending monitoring session:

- Jim Tomblinson - THA - principle
- Jeneane Wise - Christman - project coordinator
- Dan Rooney - Christman - project manager and superintendent
- Ralph J. Stephenson - Consultant

Some attended portions of the meeting only.

Actions taken:

- Inspected project with Mr. Rooney.
- Evaluated and discussed project progress with Mr. Rooney.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
May 14, 1996

- Reviewed project status with Mr. Tomblinson, Ms. Wise, and Mr. Rooney

Summary:

Project work has been measured against the issue #1 network model dated February 1, 1996 (wd 786), prepared by Dan Rooney of Christman. Mr. Rooney recently updated this network to issue #2 dated May 14, 1996 (wd 859), and we used the updated network to prepare the monitoring analysis of the project in this report. New desired target dates have been set by Mr. Rooney in the issue #2 network as noted above.

Currently project phase 2 work is proceeding fairly well, although some recent slowdowns have been experienced. The slowing is primarily in getting casework, already on the job, distributed to its position on each of the upper floors. The elevator has not been available. This has forced storing the casework on the first floor. In turn work has been hindered at all three levels of the building. However Mr. Rooney projects that the elevator will be available on or about May 15, 1996 (wd 860) and this will allow stored casework to be moved to its installation location.

Below is a brief summary of phase 2 work status as of Tuesday, May 14, 1996 (wd 859)

Third Floor - issue #2 desired target completion - pm June 21, 1996 pm (wd 887)

All major work at the third floor except for some sprinkler work is currently meeting targets between early and late starts and finishes. Ceiling grid is complete, and grills, diffusers, and light fixtures are substantially complete. Most floor tile has been laid. There is a need for state approval on the medintech flooring so it can be installed at both the open floor areas and under the high density shelving.

Another item important to maintaining floor progress is a decision on revisions affecting chalkboards and tack boards. This is needed for all three floors.

Mr. Rooney expects installation of casework to begin on the am of May 15, 1996 (wd 860). It was due to begin the am of May 13, 1996 (wd 858) giving a lag of 2 wd. Applying the lag to the desired completion date of the pm of June 21, 1996 (wd 887) gives a projected completion at the third floor of the pm of June 25, 1996 (wd 889).

Second Floor - issue #2 desired target completion - pm July 5, 1996 pm (wd 897)

All major work at the second floor is currently meeting target dates between early and late starts and finishes. The ceiling grid is complete and light fixtures, grills, and diffusers have been installed. Installation of casework will probably begin about May 20, 1996, a 1 or 2 working day lag over the desired start. This lag might force moving the completion date of the floor to about the evening of July 8, 1996. The date of contract substantial completion is the evening of July 25, 1996 pm (wd 910), so the slight current lag is not serious at present.

As at the third floor there is a need for state approval on the medintech flooring and on chalkboards and tack boards.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
May 14, 1996

First Floor - issue #2 desired target completion - July 25, 1996 pm (wd 910)

Lags at the first floor are in installation of sprinkler piping by about 8 working days, auditorium dry wall by about 4 working days, and masonry erection by about 3 working days.

Because the first floor is a critical level in the finish sequence it is important that the lags there be regained as soon as possible. Mr. Rooney and I discussed this in our session, and once casework installation starts, he will review the plan of work for the first floor to see how the current lags can be regained.

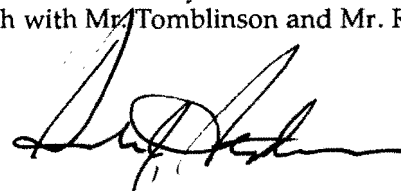
General

Mr. Rooney recently tabulated the dates for expiration of several labor contracts that might possibly affect the Gorman project. Four had potential impact and I recommend that the design and construction team check again to see if there are any predictable disruptions that might affect the project.

In summary, at present the project is well in alignment with the plan of work at the third and second floors and slightly behind at the first floor. Since the job is now nearing its completion date and there remain only 51 working days to substantial completion, all items affecting field work continuity must be cleared promptly. These items include approvals, revisions, punch list procedures, and close out of the job.

Attached is a essay that might be of help in preparing a close out check list. It is not, by any means, a complete tabulation of close out items, but does contain some of the items that are sometimes missed in the process.

This report is being sent to Mr. Jim Tomblinson at THA, and to Mr. Dan Rooney at Christman. They will distribute the information further as required. I shall be in touch with Mr. Tomblinson and Mr. Rooney soon to set the next monitoring date as required.



Ralph J. Stephenson, P. E.

Enclosure: Closing out A Construction Project

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
June 25, 1996

Subject: Monitoring Report #10 - Construction - Phase 2
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Monitoring Date: Tuesday, June 25, 1996 (wd 888)

Monitored from: Christman phase two network - Issue #1 - dated February 1, 1996 (wd 786). Used key dates from Issue #1 network as measuring milestones

Key Dates: Issue #1 dates

- May 17, 1995 (wd 606) - date of contract
- January 8, 1996 am (wd 768) - phase 2 work field work started
- June 14, 1996 pm (wd 882) - target completion of 3rd floor - phase 2
- July 10, 1996 pm (wd 899) - target completion of 2nd floor - phase 2
- July 23, 1996 pm (wd 908) - target completion of 1st floor - phase 2
- July 25, 1996 pm (wd 910) - contract date - substantially complete phase 2
- September 1, 1996 pm (wd 936) - contract date - complete entire project.

22 working days remaining on project to substantial completion.

48 working days remaining on project to final completion.

Those attending monitoring session:

- Ron Korzecke - THA Construction Administrator
 - Jeneane Wise - Christman - Project manager
 - Dan Rooney - Christman - Project engineer and superintendent
 - Ralph J. Stephenson - Consultant
- Some attended portions of the meeting only.

Actions taken:

- Inspected project with Mr. Rooney and Mr. Korzecke.
- Evaluated and discussed project progress with Mr. Rooney and Mr. Korzecke.
- Reviewed project status with Ms. Wise, and Mr. Rooney.

Summary:

Project work was measured against the issue #1 network at this monitoring. Mr. Rooney had updated the issue #1 network to issue #2 and issue #3: However the original issue #1 dated February 1, 1996 (wd 786) conformed closely enough to the updated plan and logic so it could be used as a performance standard for the end dates. Mr. Rooney is still aiming to reach substantial completion by the original target of the pm of July 25, 1996 (wd 910).

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
June 25, 1996

Currently project phase 2 work is proceeding well except for a current work stoppage caused by a laborer strike in the Flint area. Laborers on the project left the job today about 10:30 A.M. Other trades on the job left the site shortly afterwards. There is no word on when the strike might be settled.

Overall the project is at about the same position on the second and third floors, and slightly behind the upper floors at the first level. However Mr. Rooney feels work to be done at levels two and three should be able to be completed by a desired turnover of pm of July 12, 1996 (wd 901). The early target has been set to allow time to complete finishes at the center stairway by the substantial completion date of July 25, 1996 (wd 910). This stair is the current second means of access and egress to the second and third floor available to building occupants.

Below is a brief summary of phase 2 work status as of Tuesday, June 25, 1996 (wd 888).

Third Floor - desired target completion - pm July 12, 1996 (wd 901)

Work at the third floor is substantially complete except for the following:

- Chalkboards and tack boards - MCC has decided to use the originally specified materials. No word is available on delivery. However Mr. Rooney feels they can be on site by July 5 1996 (wd 896).
- Fire extinguishers - Cabinets are installed and the extinguishers are on the job but not installed in cabinets.
- Acoustic ceiling tile - Installation being held until after fire marshal's inspection on Thursday, June 27, 1996 (wd 890).
- High density shelving - Are in storage and will be installed when additional shelving per changer order #6 has been obtained.
- Classroom furniture - Arriving on job site Friday, July 5, 1996 (wd 896).
- Door hardware - Being installed.
- Change order #6 work - This is a group of miscellaneous changes that are being completed as materials can be procured. At all floors, some of the doors are being changed to include door lights. These will be installed as door window kits arrive on the job.

Second Floor - desired target completion - pm July 12, 1996 pm (wd 901)

Work at the second floor is substantially complete except for the following:

- Chalkboards and tack boards - MCC has decided to use the originally specified materials. No word is available on delivery. However Mr. Rooney feels they can be on site by July 5 1996 (wd 896).
- Corridor floor tile - To be installed after acoustic tile has been installed.
- Fire extinguishers - Cabinets are installed and the extinguishers are on the job but not installed in cabinets.
- Acoustic ceiling tile - Installation being held until after fire marshal's inspection on Thursday, June 27, 1996 (wd 890).
- High density shelving - In storage and will be installed when additional shelving per change order #6 has been obtained.
- Classroom furniture - Arriving on job site Friday, July 5, 1996 (wd 896).
- Door hardware - Being installed.
- Change order #6 work - Being completed as materials can be procured.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
June 25, 1996

First Floor - target completion - July 25, 1996 pm (wd 910)

Work to be completed at the first floor includes:

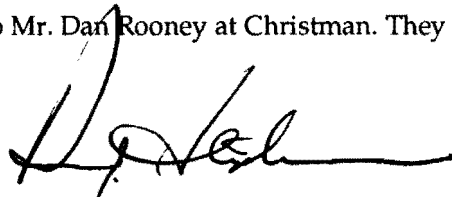
- Chalkboards and tack boards - MCC has decided to use the originally specified materials. No word is available on delivery. However Mr. Rooney feels they can be on site by July 5 1996 (wd 896).
- Fire extinguishers - Cabinets are installed and the extinguishers are on the job but not installed in cabinets.
- Acoustic ceiling tile - Installation being held until after fire marshal's inspection on Thursday, June 27, 1996 (wd 890).
- High density shelving - In storage, and will be installed when additional shelving per change order #6 has been obtained.
- Classroom furniture - Arriving on job site about Monday, July 5, 1996.
- Door hardware - Not started yet.
- Change order #6 work - Being completed as materials can be procured.
- Radiator cover painting - Not started as yet.
- Vertical blinds - Not started as yet.
- Complete painting, and installation of ceiling grid, light fixtures, diffusers, and sprinkler head - These items are proceeding in a tight sequence with each other and are as a group about 70% complete.
- Install remaining floor tile in classrooms and corridor - To be installed after ceiling tile is complete.
- Carpet - Not started as yet.
- Medintech flooring - Not started as yet.
- Furniture - Not started as yet.
- Complete painting doors and installing hardware - Ongoing

General

The project continues to move reasonably well and there is a high probability that the substantial completion date of July 25, 1996 (wd 910) will be met. There was some recent concern about completion because of the amount of work to be done under change order #6 and the time that might be required for procurement of items covered by that change order. However Mr. Rooney feels that most of the revisions will be substantially complete in time to turn over the project by July 25, 1996 (wd 910).

I will be in touch with Mr. Tomblinson shortly to determine what additional monitoring might be needed. It is generally a good idea to monitor the project at or near the completion date. However here I recommend we wait for a short time to determine the route of the laborer's strike settlement before the next monitoring is decided upon.

This report is being sent to Mr. Jim Tomblinson at THA and to Mr. Dan Rooney at Christman. They will distribute the information further as required.



Ralph J. Stephenson, P. E.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
August 1, 1996

Subject: Monitoring Report #11 - Construction - Phase 2
Gorman Building Renovation
Mott Community College
Flint, Michigan

Project Number: 93:61

Monitoring Date: Tuesday, July 30, 1996 (wd 912)

Monitored from: Christman phase two network - Issue #1 - dated February 1, 1996 (wd 786).

Key Dates:

- May 17, 1995 (wd 606) - date of contract
- January 8, 1996 am (wd 768) - phase 2 work field work started
- June 14, 1996 pm (wd 882) - target completion of 3rd floor - phase 2
- July 10, 1996 pm (wd 899) - target completion of 2nd floor - phase 2
- July 23, 1996 pm (wd 908) - target completion of 1st floor - phase 2
- July 25, 1996 pm (wd 910) - contract date - substantially complete phase 2
- September 1, 1996 pm (wd 936) - contract date - complete entire project.

24 working days remaining on project to final completion.

Those attending monitoring session:

- Jim Tomblinson - THA Principal
- Ron Korzecke - THA Construction Administrator
- Dan Rooney - Christman - Project engineer and superintendent
- Ralph J. Stephenson - Consultant

Actions taken:

- Inspected project with Mr. Rooney, Mr. Tomblinson, and Mr. Korzecke.
- Evaluated and discussed project progress with Mr. Rooney, Mr. Tomblinson, and Mr. Korzecke.
- Reviewed project status with Mr. Rooney.

Summary:

The third and second floors are being readied for a full owner move in starting on August 5, 1996 (wd 916). Certificates of substantial completion of these floors have been issued by THA. Work remaining is described in detail in the current Christman punch lists posted for each space.

First floor work is proceeding well and present plans are to complete it along with full completion of floors 2 and 3 by a desired target date of August 19, 1996 (wd 927). Also remaining to be completed and punched out by Christman and THA are the stair wells. However stair well completion will probably be done after the elevator is available. Completion of elevator work is currently set for the pm of August 1, 1996 (wd 915) When elevator work is complete, traffic in the stair wells should be reduced

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
August 1, 1996

enough to permit finishing stair areas without major interference with construction operations.

Below is a brief summary of phase 2 work status as of Tuesday, July 30, 1996 (wd 912).

Third Floor - certificate of substantial completion issued.

Work at the third floor is substantially complete except for the following:

- Chalkboards and tack boards - MCC to use the originally specified materials. Items to be on site August 2, 1996 (wd 915).
- High density shelving - To be completed August 1, 1996 (wd 915).
- Punch out and clean up - In progress.

Second Floor - certificate of substantial completion issued

Work at the second floor is substantially complete except for the following:

- Chalkboards and tack boards - MCC to use the originally specified materials. Items to be on site August 2, 1996 (wd 915).
- High density shelving - To be completed pm August 1, 1996 (wd 915).
- Punch out and clean up - In progress.

First Floor - target completion - August 19, 1996 (wd 927)

Work to be completed at the first floor includes:

- High density shelving - In progress - will be completed pm August 1, 1996 (wd 915).
- Carpet - Two offices yet to be completed.
- Medintech flooring - Joint welding yet to be done.
- Punch out and clean up - In progress.

General

The project full completion date is currently estimated by Mr. Rooney to be the pm of August 19, 1996 (wd 927). Site work is being installed and exterior clean up will proceed concurrently with interior work completion.

This evaluation is the final monitoring for the project unless conditions require further attention. The project team of Ken Gatenby, Ron Korzecke, Jim Tomblinson, Jeneane Wise, and Dan Rooney have, along with the support staff of the College, THA, Christman, and the subcontractors, performed very well on the entire program, and are to be complimented.

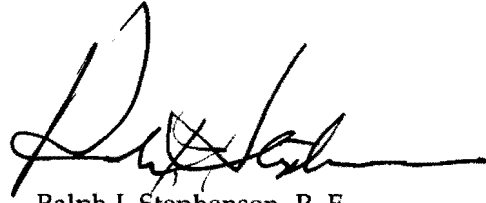
Mr. Rooney will prepare and submit to the College and THA a summary of the network model target dates and the actual dates as met on the project. This should serve as a good reference document in conjunction with the construction record set.

This monitoring report is being sent to Mr. Jim Tomblinson at THA and to Mr. Dan Rooney at Christman.

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
August 1, 1996

They will further distribute the information as required.

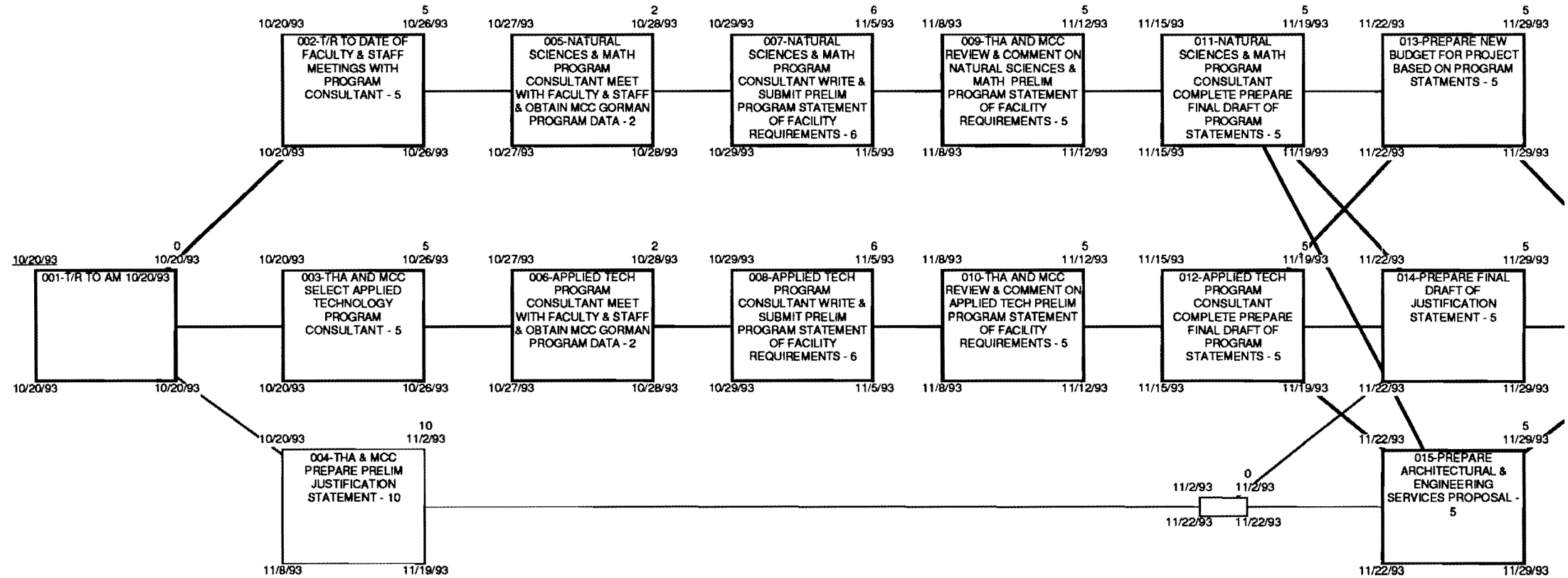
It has been a privilege to work on the Gorman remodeling and to help bring the facility on line. If I can be of further assistance, please don't hesitate to call.

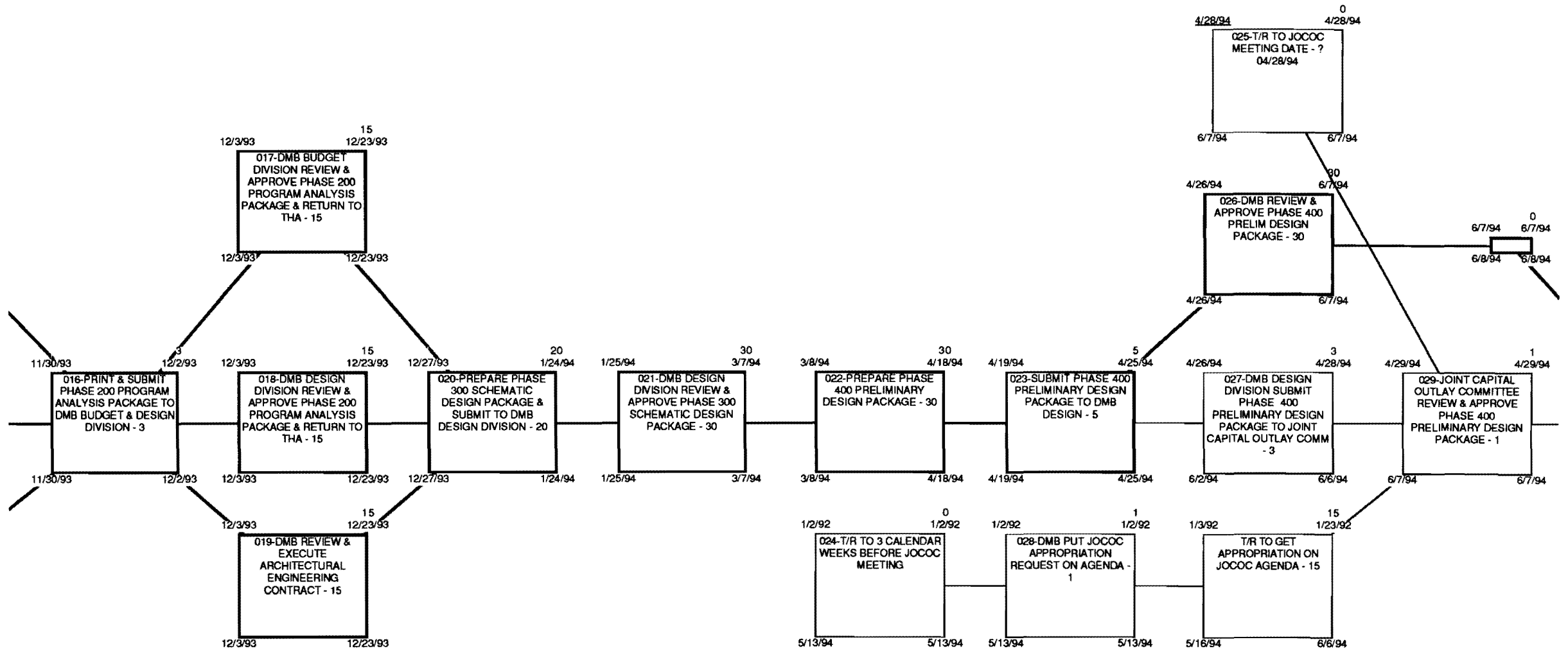
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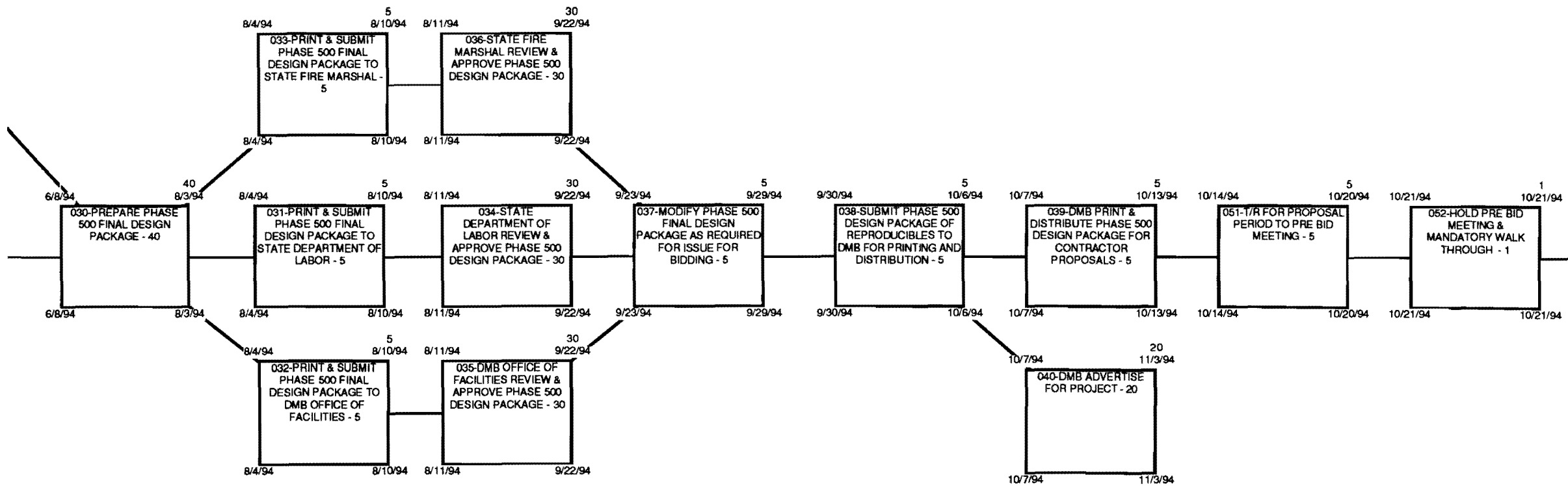
Ralph J. Stephenson, P. E.

NEW BUDGET INCLUDES

- ABATEMENT COSTS
- BUILDING WORK
- TELECOMMUNICATIONS WORK
- ARCHITECTURAL FEES
- MOVING COSTS
- PERMITS
- INSPECTION FEES
- NEW EQUIPMENT COSTS
- STATE FEES
- MISCELLANEOUS FEES AND OTHER



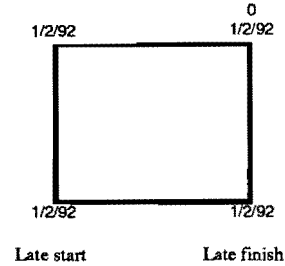




Gorman Building Renovation

Location
Early start

Duration
Early finish



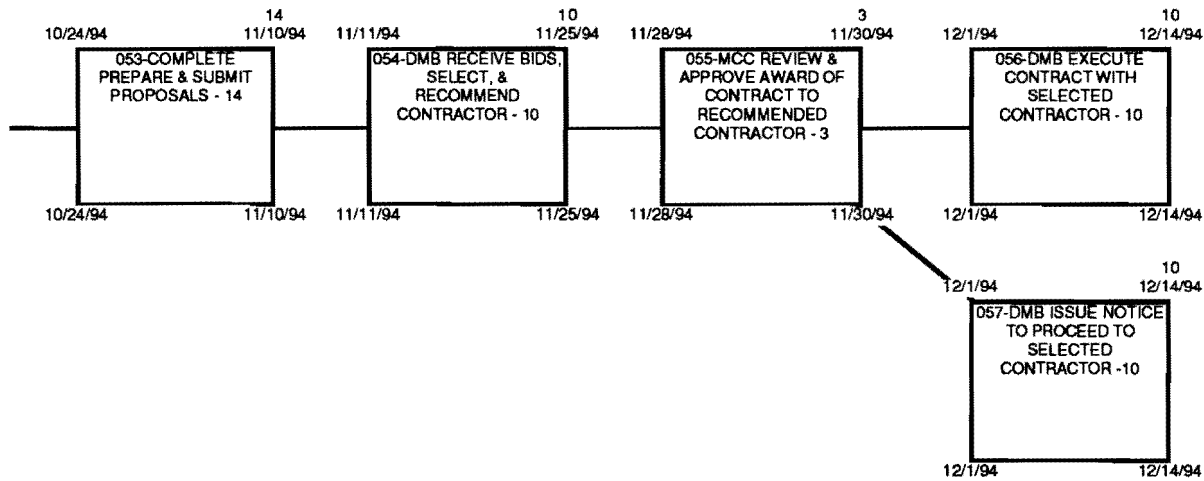
Activity Key

Issue #1 - October 18, 1993
i1 sht #SM1 lw

**NETWORK MODEL FOR MOTT
COMMUNITY COLLEGE
RENOVATION PROJECT
PHASE #2
Flint, Michigan**

THA - Architects of Record
DMB - Project Managers

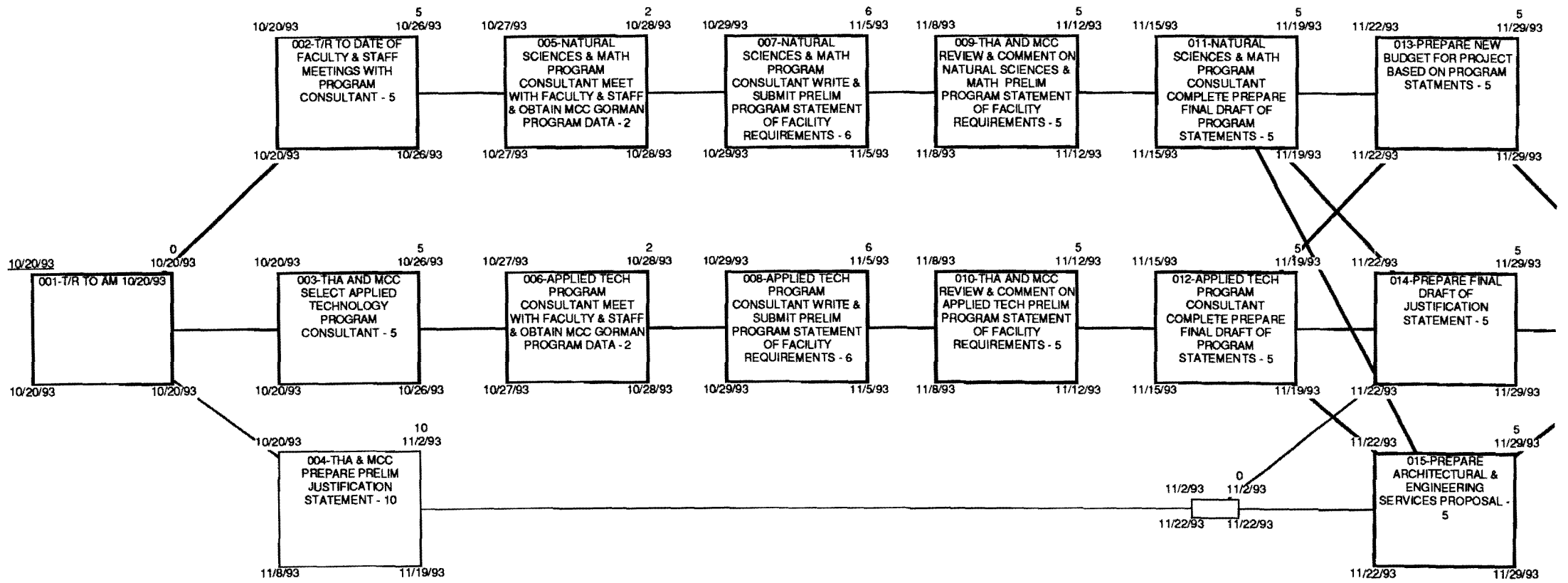
Ralph J. Stephenson, P.E., P.C.
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, Michigan 48858
ph 517 772 2537

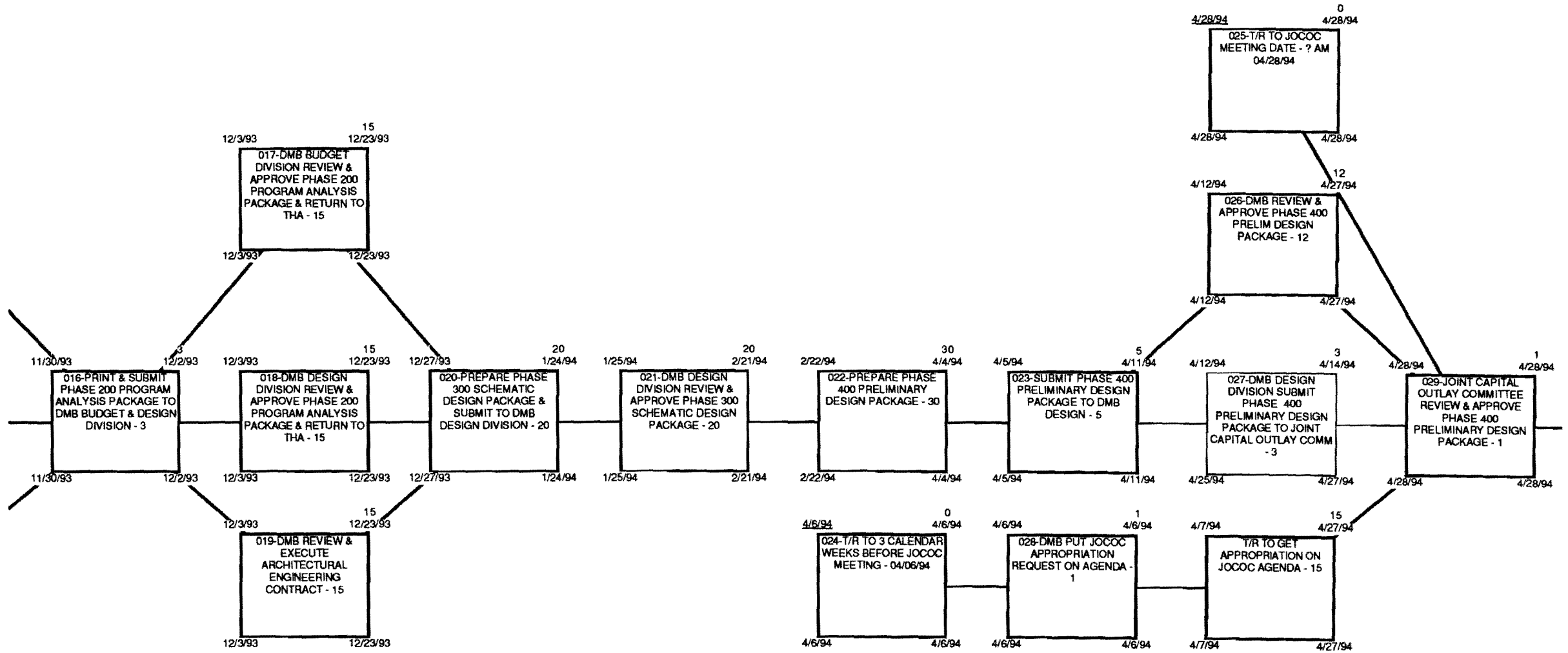


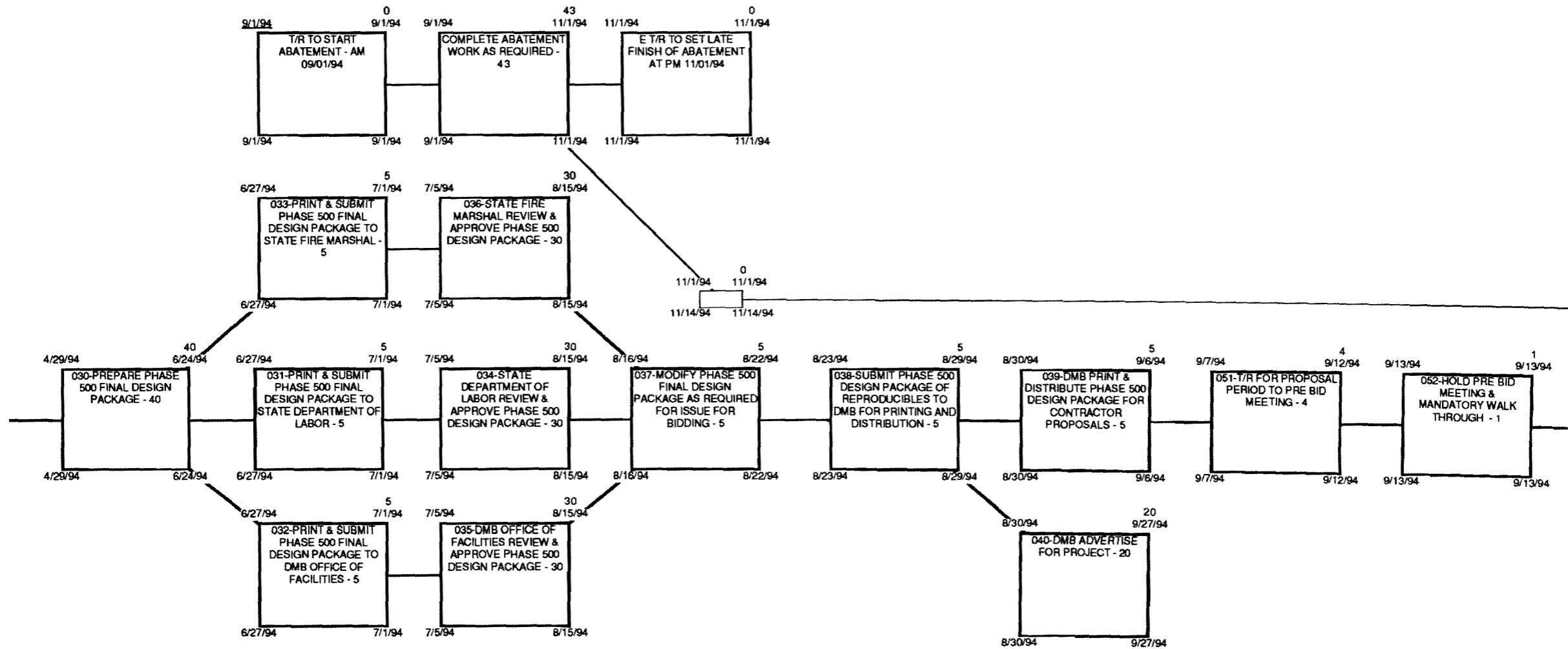
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#SM1

NEW BUDGET INCLUDES

- ABATEMENT COSTS
- BUILDING WORK
- TELECOMMUNICATIONS WORK
- ARCHITECTURAL FEES
- MOVING COSTS
- PERMITS
- INSPECTION FEES
- NEW EQUIPMENT COSTS
- STATE FEES
- MISCELLANEOUS FEES AND OTHER



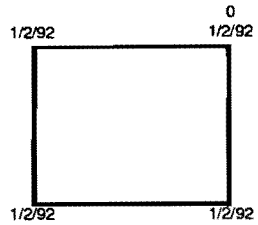




Gorman Building Renovation

Location
Early start

Duration
Early finish



Late start Late finish

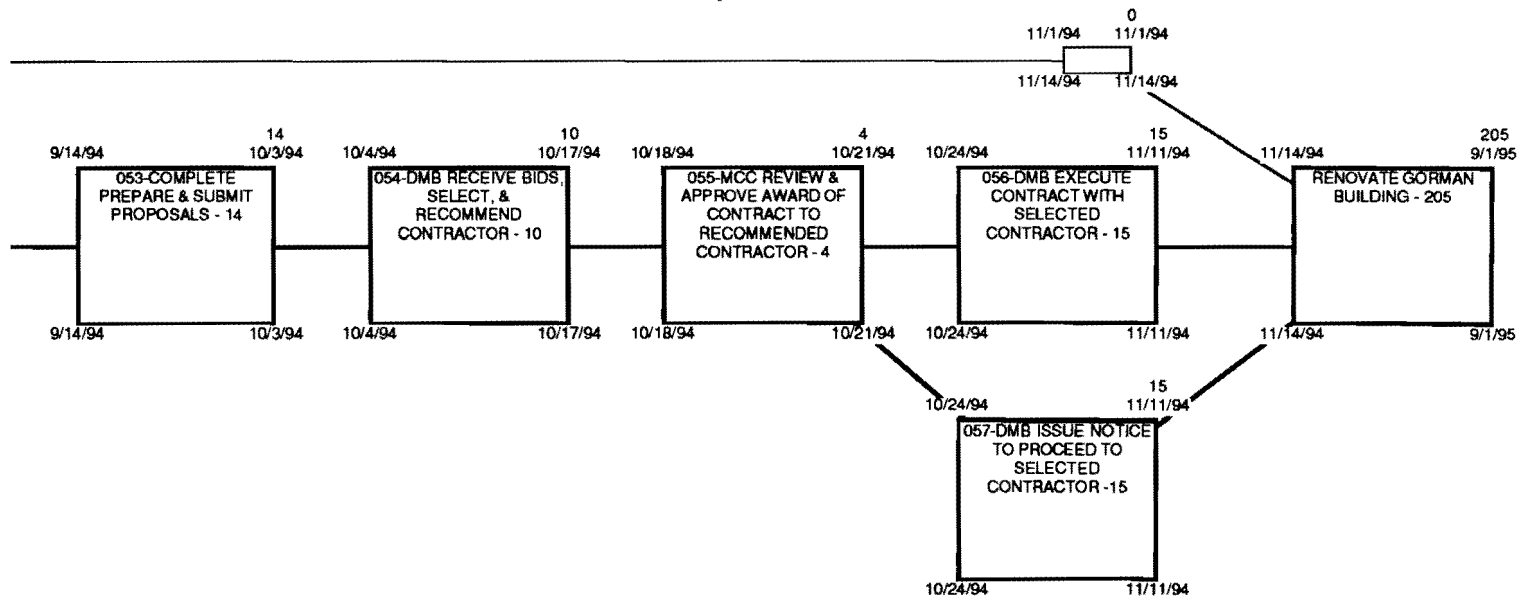
Activity Key

Issue #1 - October 18, 1993
Issue #2 - October 25, 1993
I2 sht #SM1 lw

**NETWORK MODEL FOR MOTT
COMMUNITY COLLEGE
RENOVATION PROJECT
PHASE #2
Flint, Michigan**

THA - Architects of Record
DMB - Project Managers

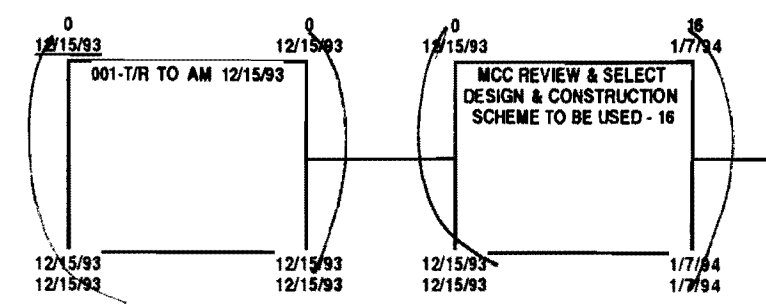
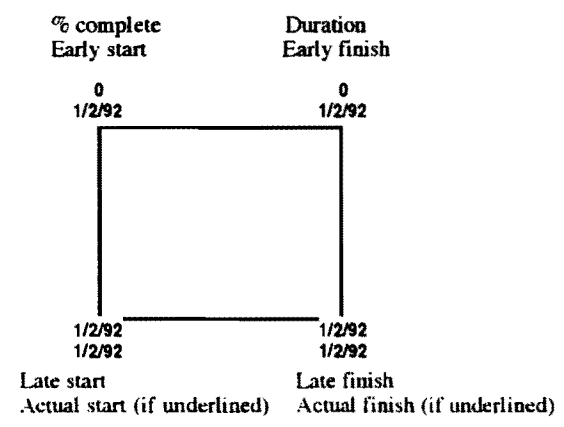
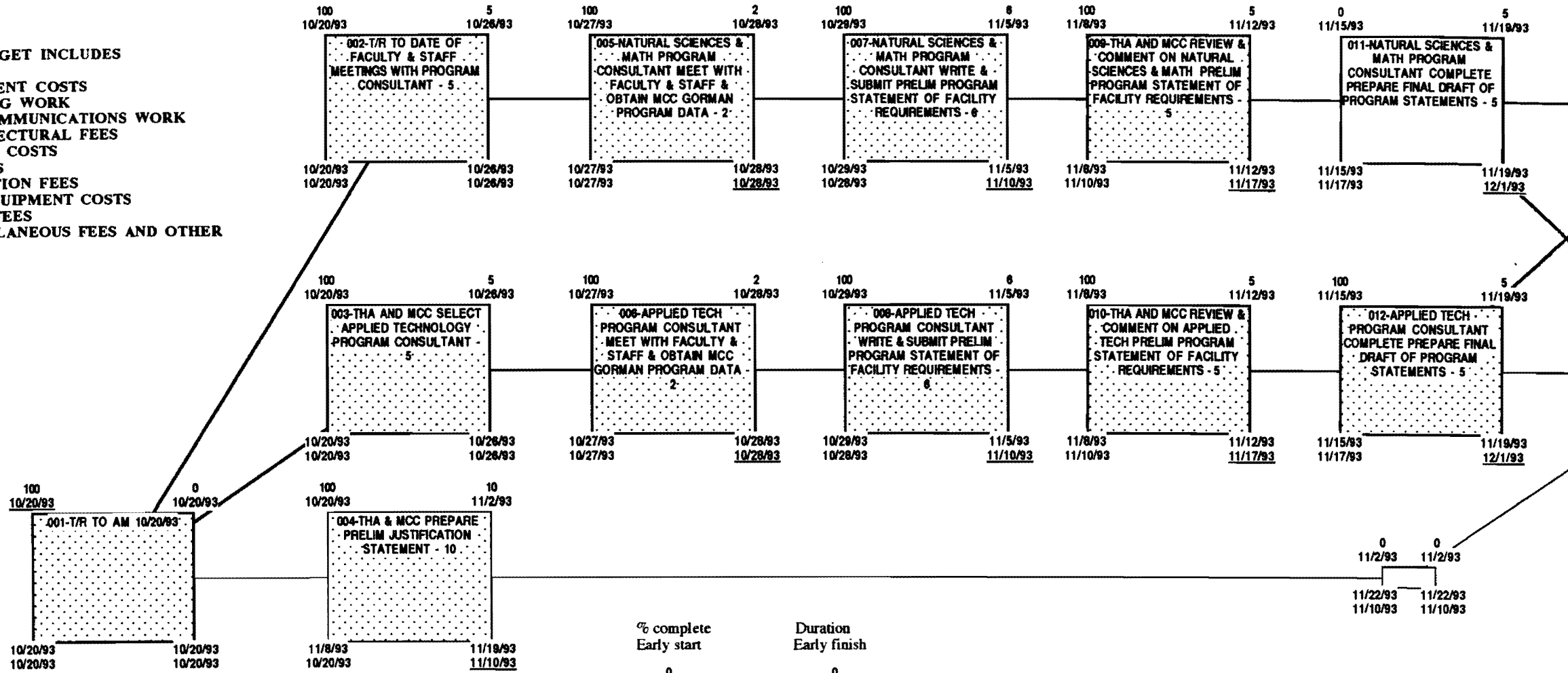
Ralph J. Stephenson, P.E., P.C.
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, Michigan 48858
ph 517 772 2537



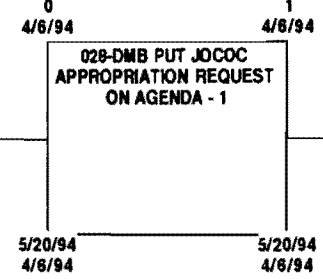
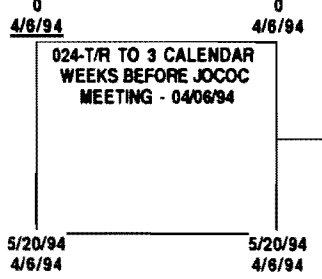
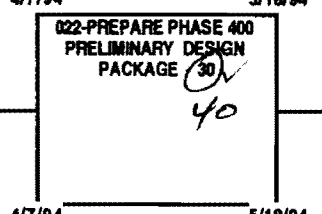
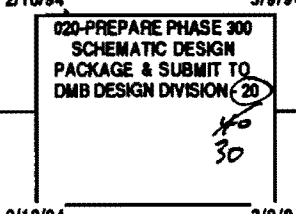
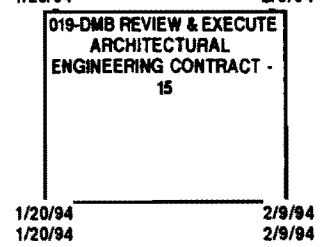
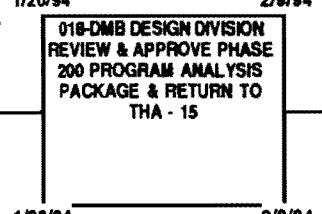
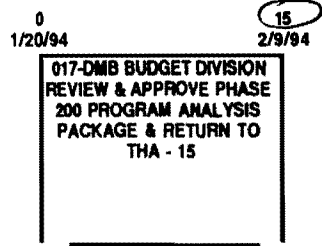
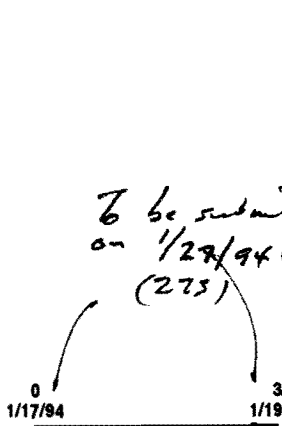
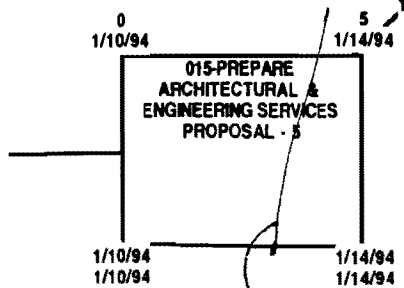
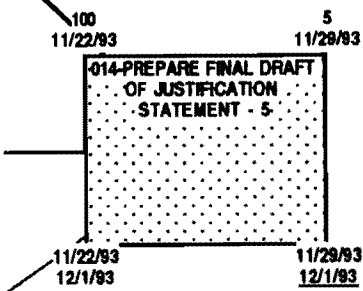
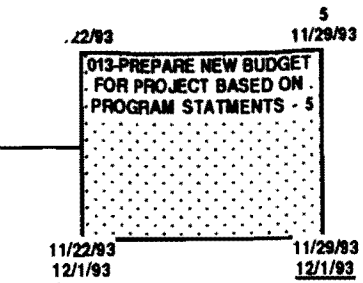
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013-PREPARE NEW BUDGET FOR PROJECT BASED ON PROGRAM STATEMENTS - 5			██████																																																																																																																																																						
014-PREPARE FINAL DRAFT OF JUSTIFICATION STATEMENT - 5			██████																																																																																																																																																						
015-PREPARE ARCHITECTURAL & ENGINEERING SERVICES PROPOSAL - 5			██████																																																																																																																																																						
016-PRINT & SUBMIT PHASE 200 PROGRAM ANALYSIS PACKAGE TO DMB BUDGET & DESIGN DIVISION - 3			█																																																																																																																																																						
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018-DMB DESIGN DIVISION REVIEW & APPROVE PHASE 200 PROGRAM ANALYSIS PACKAGE & RETURN TO THA - 15			████████████████████																																																																																																																																																						
019-DMB REVIEW & EXECUTE ARCHITECTURAL ENGINEERING CONTRACT - 15			████████████████████																																																																																																																																																						
020-PREPARE PHASE 300 SCHEMATIC DESIGN PACKAGE & SUBMIT TO DMB DESIGN DIVISION - 20								████████████████████																																																																																																																																																	

NEW BUDGET INCLUDES

- ABATEMENT COSTS
- BUILDING WORK
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- ARCHITECTURAL FEES
- MOVING COSTS
- PERMITS
- INSPECTION FEES
- NEW EQUIPMENT COSTS
- STATE FEES
- MISCELLANEOUS FEES AND OTHER



Activity Key



Hold this time.

1/20/94

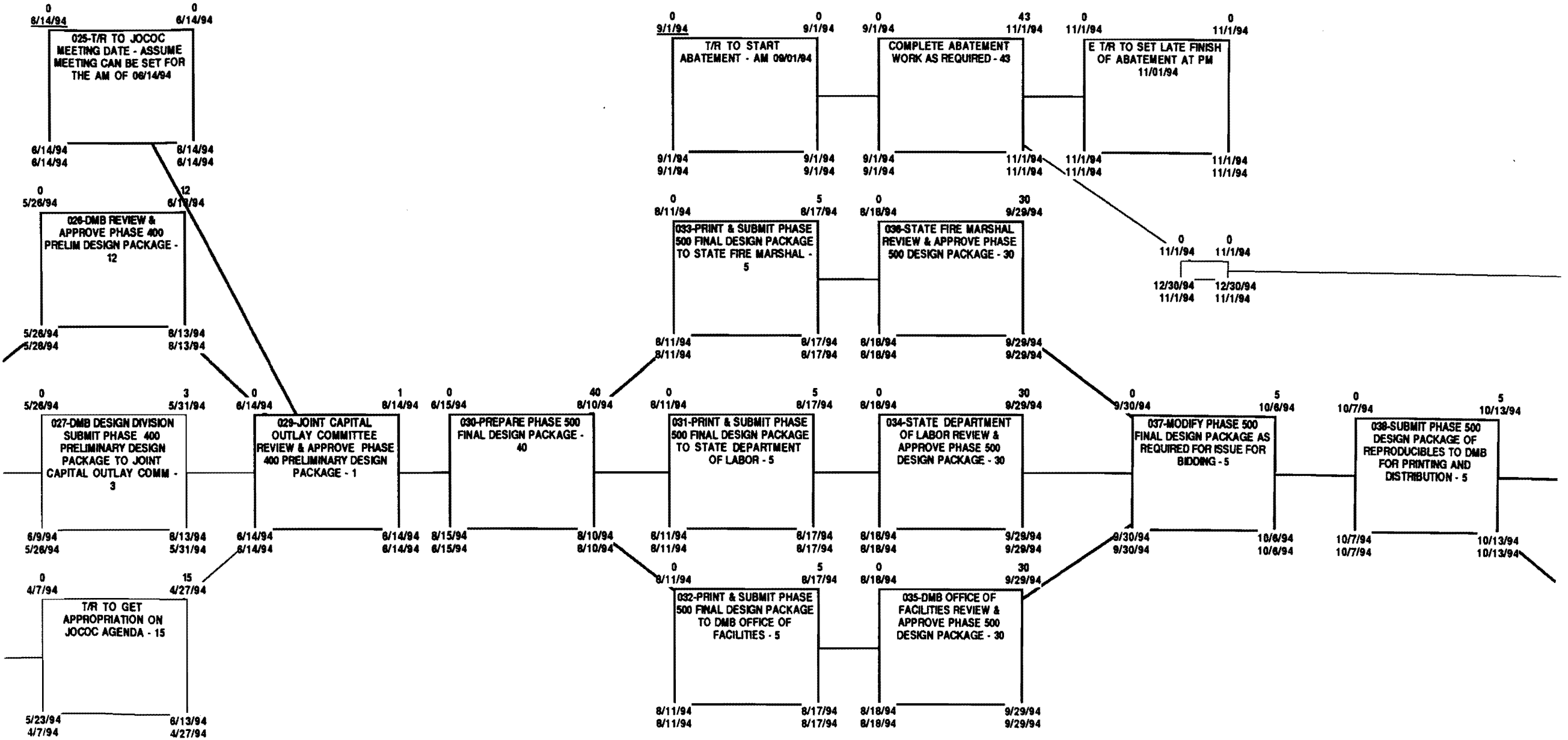
To be submitted on 1/29/94 (275)

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1/20/94 (228)



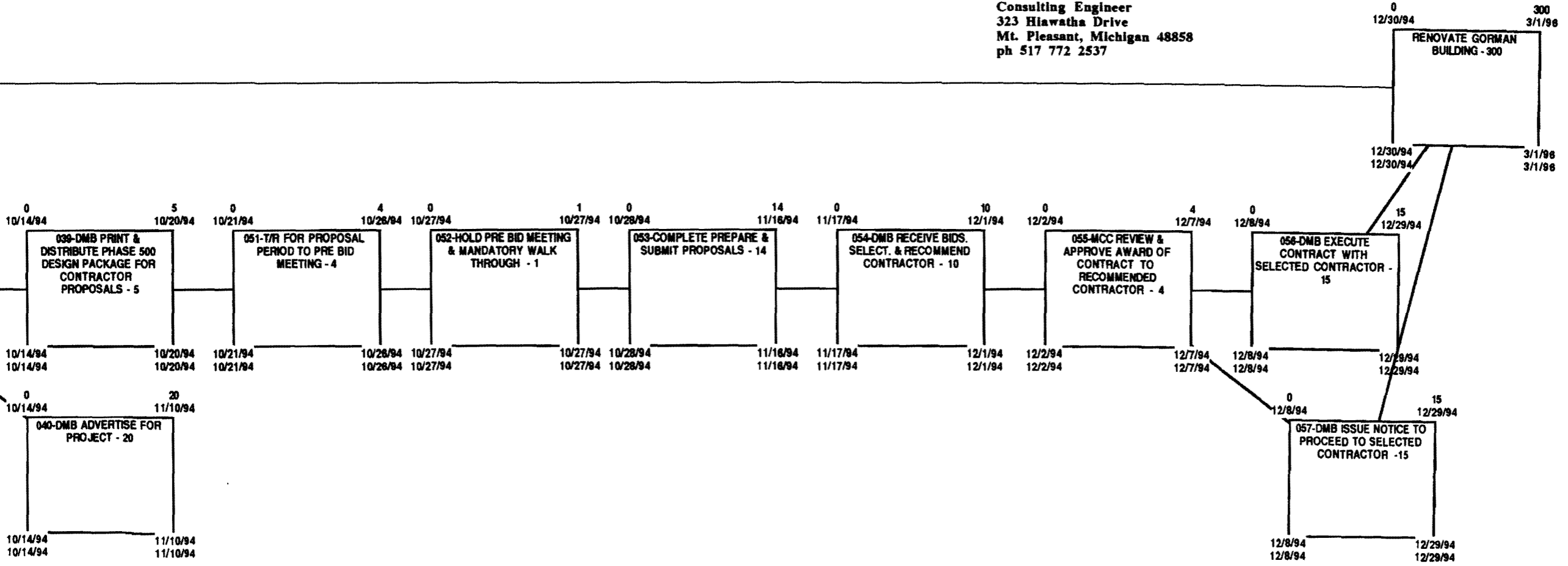
Gorman Building Renovation

Issue #1 - October 18, 1993
 Issue #2 - October 25, 1993
 Issue #3 - December 15, 1993
 I3 sht #SM1 sw

NETWORK MODEL FOR MOTT
 COMMUNITY COLLEGE
 RENOVATION PROJECT
 PHASE #2
 Flint, Michigan

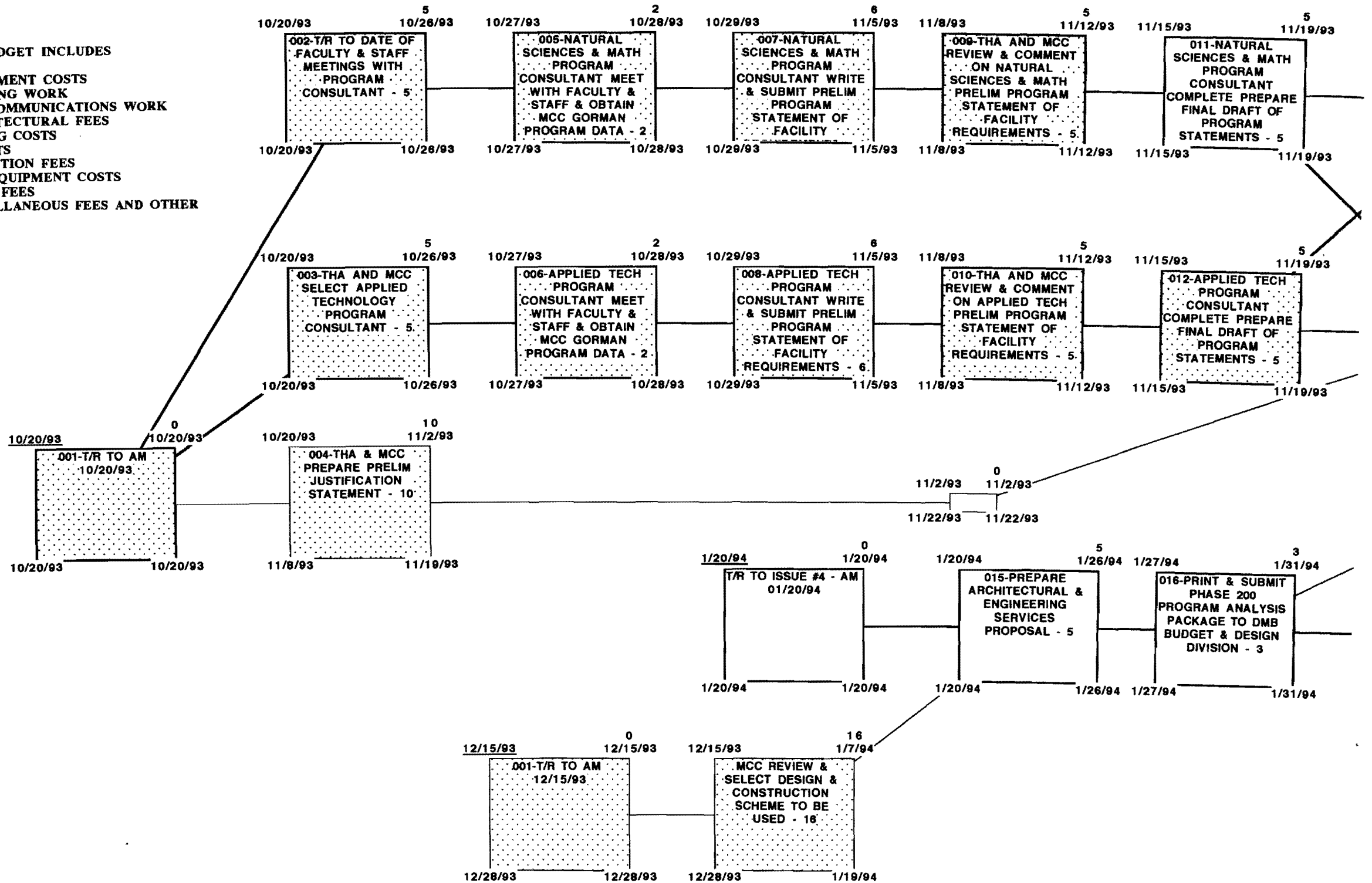
THA - Architects of Record
 DMB - Project Managers

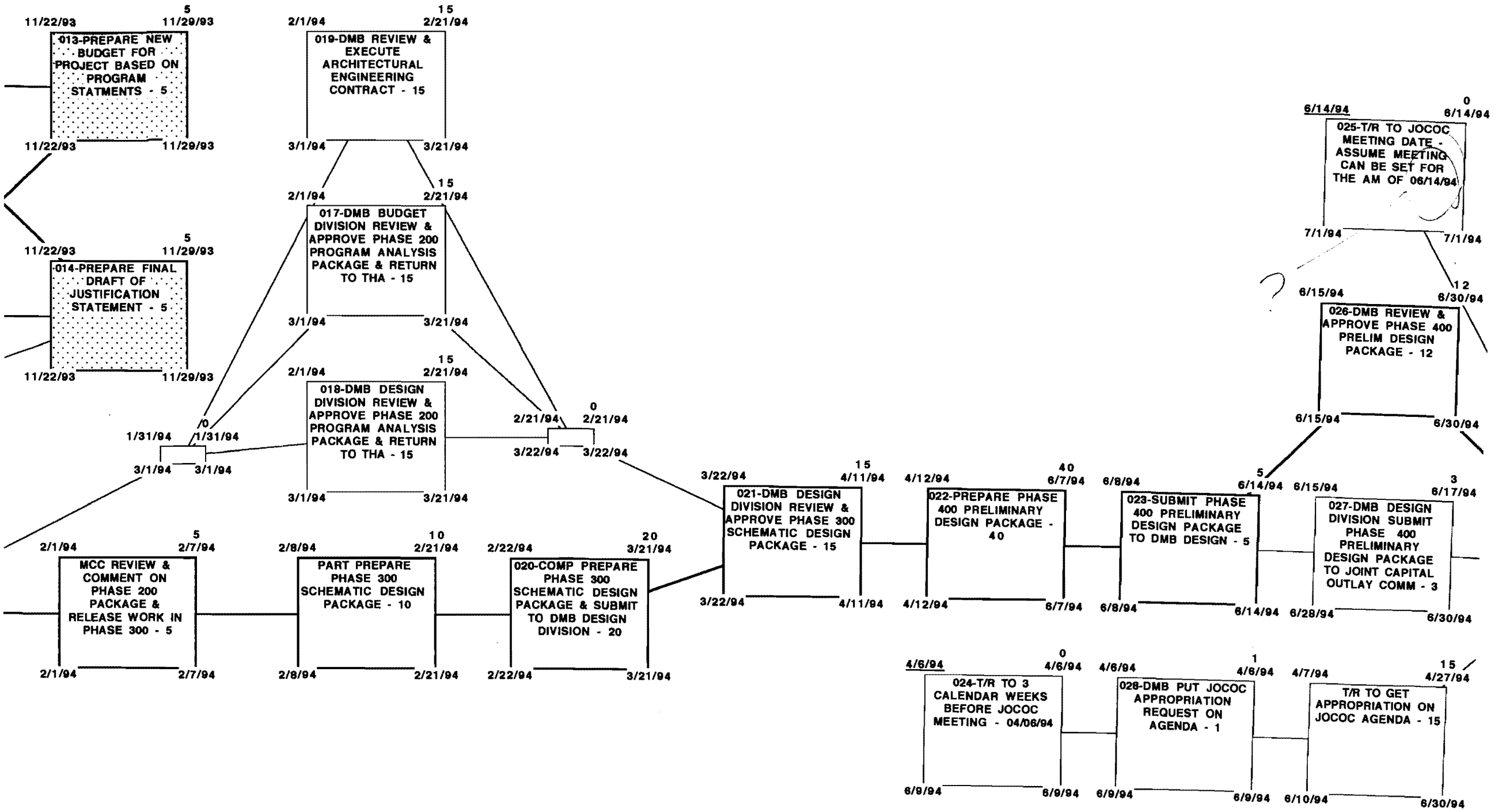
Ralph J. Stephenson, P.E., P.C.
 Consulting Engineer
 323 Hiawatha Drive
 Mt. Pleasant, Michigan 48858
 ph 517 772 2537

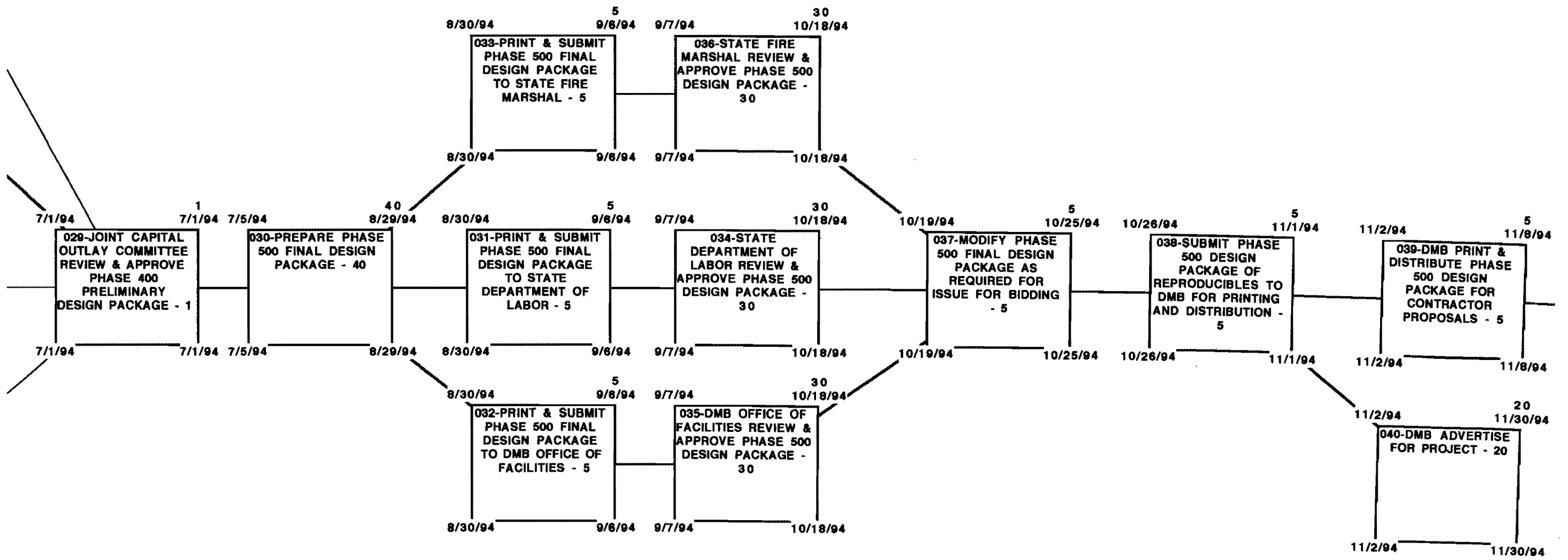


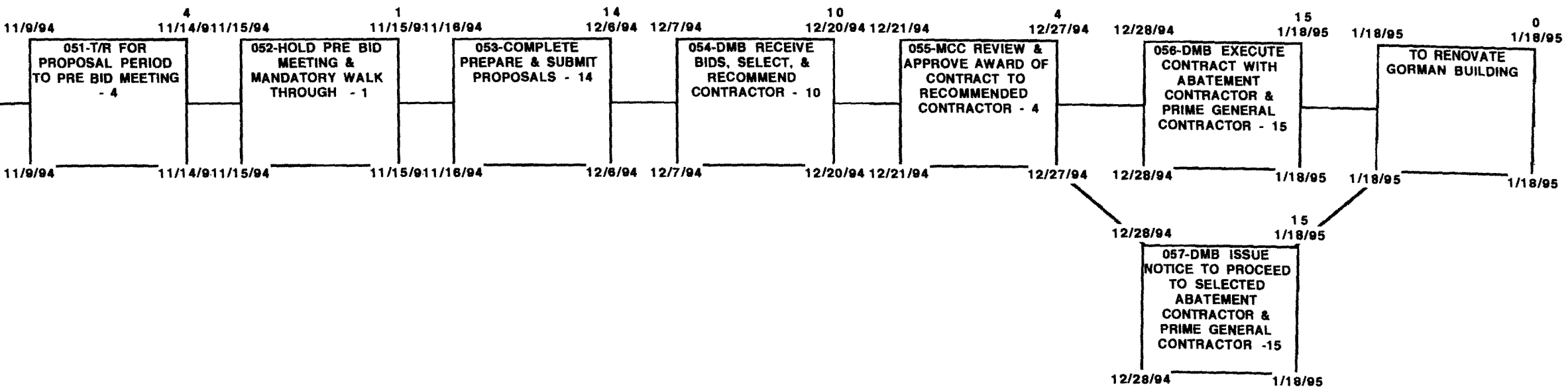
NEW BUDGET INCLUDES

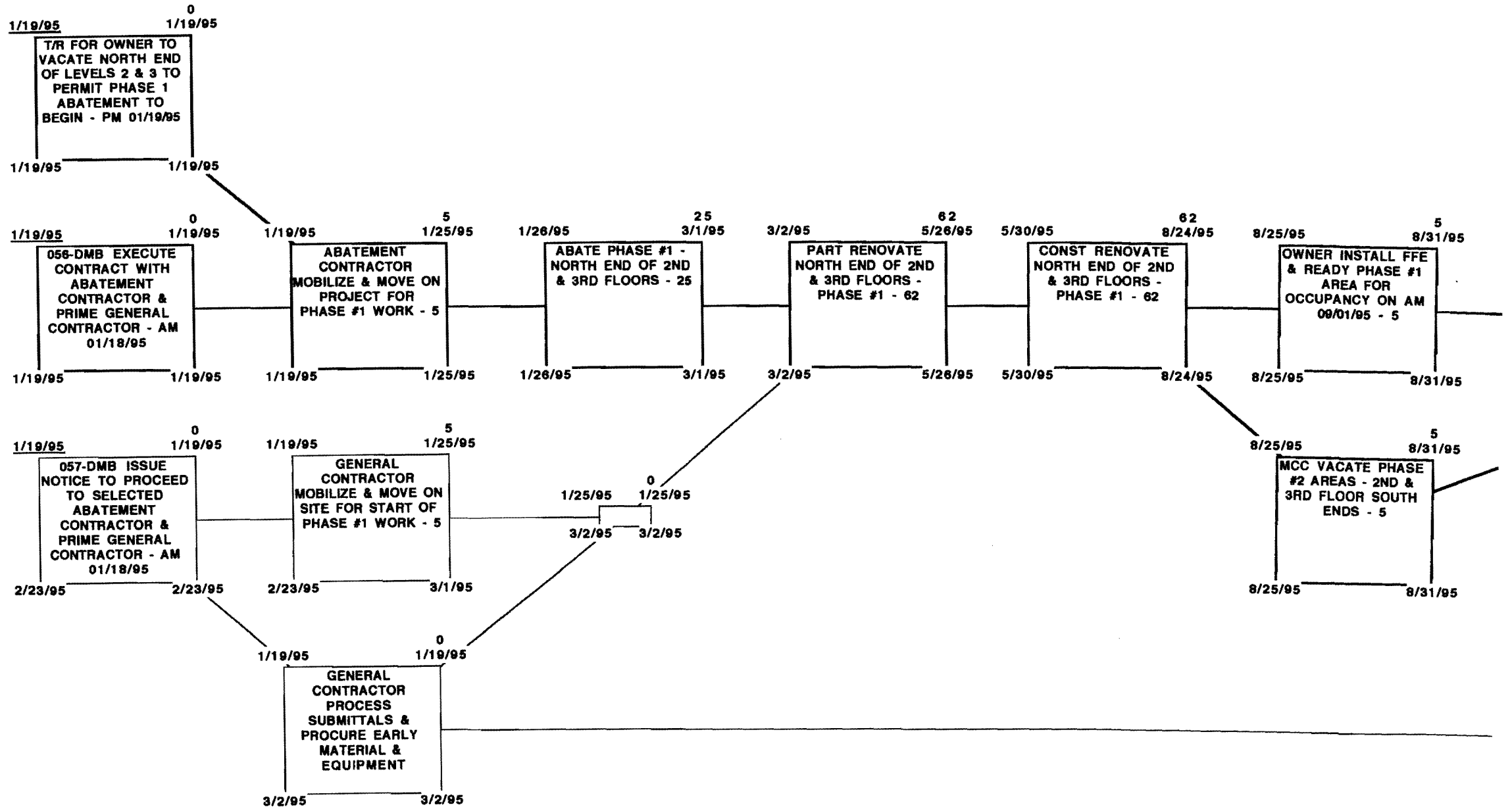
- ABATEMENT COSTS
- BUILDING WORK
- TELECOMMUNICATIONS WORK
- ARCHITECTURAL FEES
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- PERMITS
- INSPECTION FEES
- NEW EQUIPMENT COSTS
- STATE FEES
- MISCELLANEOUS FEES AND OTHER

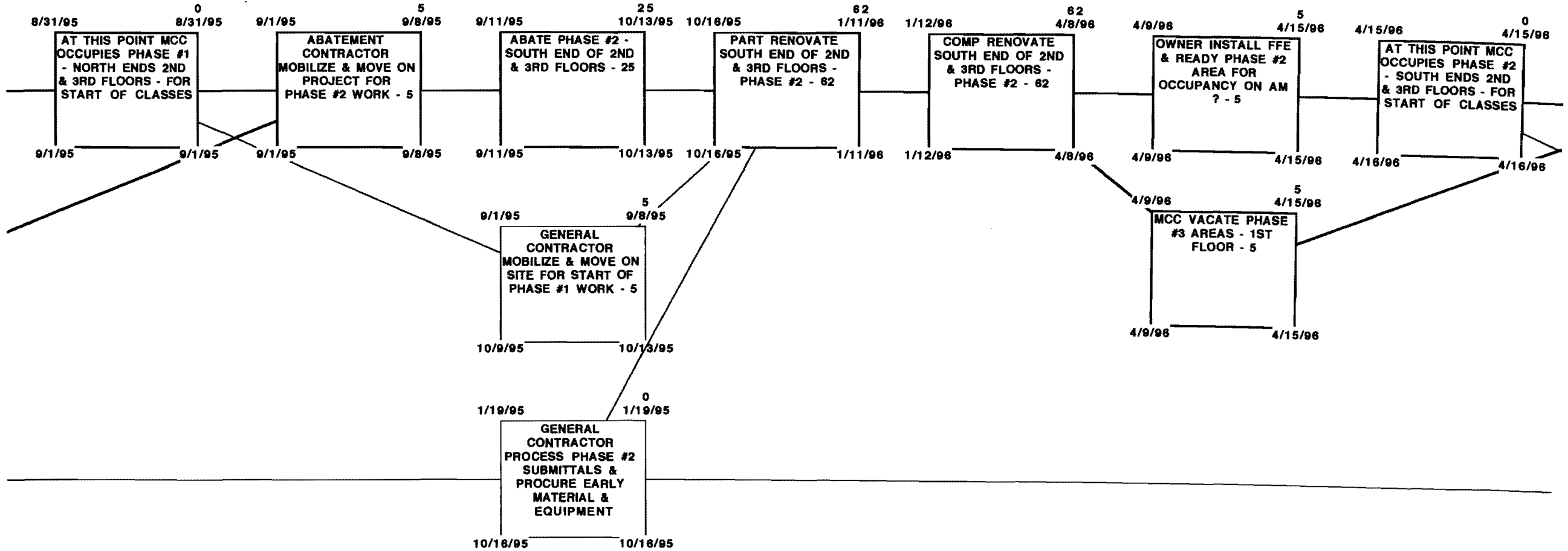


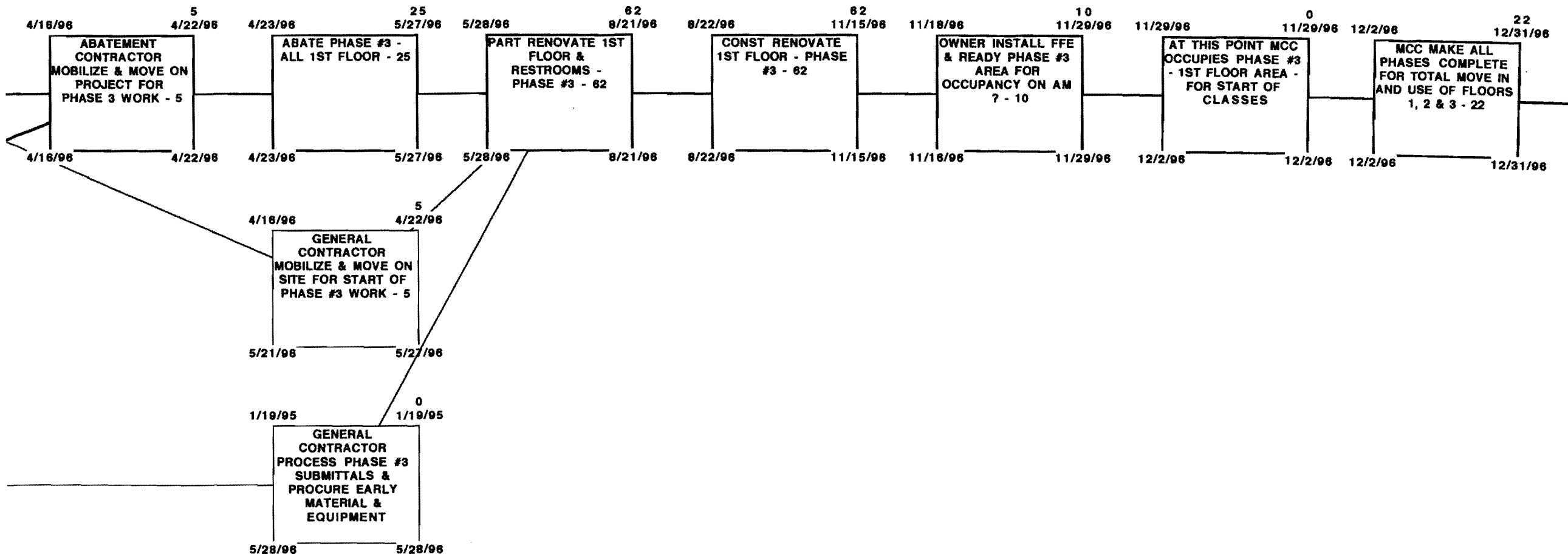


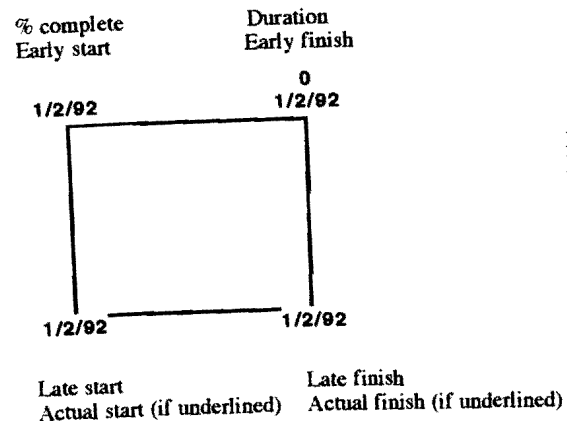
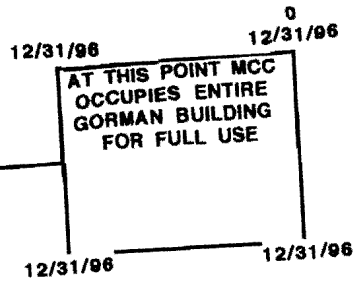












Activity Key

- Issue #1 - October 18, 1993
- Issue #2 - October 25, 1993
- Issue #3 - December 15, 1993
- Issue #4 - January 20, 1994
- i4 sht #SM1 sw

Gorman Building Renovation
**NETWORK MODEL FOR MOTT
 COMMUNITY COLLEGE
 RENOVATION PROJECT
 PHASE #2
 Flint, Michigan**

**THA - Architects of Record
 DMB - Project Managers**

Ralph J. Stephenson, P.E., P.C.
 Consulting Engineer
 323 Hiawatha Drive
 Mt. Pleasant, Michigan 48858
 ph 517 772 2537

**Sheet
 #SM1**