

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
July 10, 1991

Subject: Monitoring Report #1
Mott Facilities Maintenance Building
Mott Community College
Flint, Michigan

From: Ralph J. Stephenson PE

Project: 91:29

Data disk: d270 rjs

Date of Monitoring: July 3, 1991 (wd 130)

Monitored from:

- Sheet #1, Issue #1 network model dated July 3, 1991 (wd 130)

Key dates:

- June 25, 1991 (wd 124) - Letter of intent issued
 - June 26, 1991 (wd 125) - Mobilize & move on site
 - September 3, 1991 (wd 172) - Start of school for fall
 - December 13, 1991 (wd 245) - Contract completion date
- Total time available for contract work = 245 - 124 = 121 working days

Actions taken:

- Reviewed project with E & L and major sub contractors
- Prepared preliminary network model with Mr. Forsmark & Mr. Wallace of E & L
- Identified long lead items
- Printed meeting notes and network models for Mr. Forsmark

Those attending meeting:

Junior Paul - Flint Community College
Jerry Harburn - THA
Bert Forsmark - Erickson & Lindstrom
Al Wallace - Erickson & Lindstrom
Doug Monty - Hill Steel
Denny Siegel - Keasey Electric
Greg Alchin - Walter Mechanical
Tom Laurin - Dee Cramer
Don Heron - Walter Mechanical
Alvin Ashbaker - Ashbaker Masonry
Tom Bates - Superior Roofing
Ralph J. Stephenson - Consultant

General Summary:

We first made a general review of the construction documents and conferred with the major sub contractors on the project. Notes of our discussion are contained in the meeting notes accompanying this report. We next began preparation of a preliminary network model of the project. Much of the network was completed except for the site

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
July 10, 1991

work and the lower level interior work.

We identified some of the key procurement items including the following:

- Structural steel, steel joists and metal deck
- Pre insulated pipe
- Gasoline tank and related piping and systems
- Heating equipment
- Control Systems
- Louvers
- Light fixtures
- Switch gear
- Lighting and power panels
- Sheet metal ductwork
- Face brick

Most of these were incorporated into the network model using submittal, approval, fabrication and delivery data provided by the project staffs attending the meeting.

Erickson and Lindstrom moved on the job on June 26, 1991 (wd 125) and are presently stripping the area and installing utility work. Critical early site activities include relocating an 8" gas line and relocating and connecting the primary power service. Work is in progress on both.

We were not able to complete the network plan at this session due to the press of time and the need to obtain more data on portions of the work. However we were able to complete a preliminary network for the substructure, the superstructure, the exterior skin and the interior rough and finish work for the upper level (1st floor). This network was printed out and given to Mr. Forsmark for copying and distribution. I requested he furnish a copy to Mr. Paul and Mr. Harburn for their information.

Subsequent to the meeting I reviewed the work plan and made several revisions of the graphics and numbered the activities for ease of reference. The revised copy of the issue #1 network model is enclosed with this monitoring report along with a bar chart translation of the model.

This report is being sent to Mr. Bert Forsmark, Mr. Jerry Harburn and Mr. Junior Paul. Further distribution as needed will be made by them.

I shall plan to inspect and evaluate the project status regularly as work proceeds and will be in touch with Mr. Harburn shortly to set the next planning and monitoring date. At the next session we will plan on completing the full network model for the site work and the remaining interior rough and finish work.



Ralph J. Stephenson PE PC

1. **Mott Facilities Maintenance Building notes**
2. **8:38:21 AM - Wednesday, July 3, 1991 (wd 130)**
 - 2.1. **Mott Facilities Maintenance Building notes**
 - 2.2. **Those attending**
 - 2.2.1. **Junior Paul - Mott Community College**
 - 2.2.2. **Jerry Harburn - THA**
 - 2.2.3. **Al Wallace - E & L**
 - 2.2.4. **Bert Forsmark - E & L**
 - 2.2.5. **Doug Monty - Hill Steel**
 - 2.2.6. **Denny Siegel - Keasey Electrical**
 - 2.2.7. **Greg Alchin - Walter Mechanical**
 - 2.2.8. **Tom Laurin - Dee Cramer**
 - 2.2.9. **Don Heron - Walter Mechanical**
 - 2.2.10. **Alvin Ashbaker - Ashbaker Masonry**
 - 2.2.11. **Tom Bates - Superior Roofing**
 - 2.2.12. **Ralph J. Stephenson - consultant**
 - 2.3. **Those Involved**
 - 2.3.1. **THA**
 - Jerry Harburn - principal in charge
 - Bob Hall - project manager
 - Ron Korzecke - field inspector
 - 2.3.2. **Erickson & Lindstrom**
 - Dave Anthony - President
 - Bert Forsmark - project manager
 - Al Wallace - superintendent
 - 2.3.3. **Walters Mechanical**
 - Don Heron
 - Tom Laurin - Dee Cramer
 - Greg
 - 2.3.4. **Keasey Electric**
 - Denny Siegel - superintendent
 - 2.3.5. **Alvin Ashbaker - masonry**
 - 2.3.6. **J & W Drywall**
 - Willie
 - 2.4. **Key dates**
 - 2.4.1. **Building dates**
 - 06/25/91 am (wd 124) - letter of intent issued
 - 12/13/91 pm (wd 244) - project complete
 - Contract executed - in work
 - 06/26/91 am (wd 125) - move on site to begin work
 - Total wd for project = 120
 - 2.4.2. **Trade contract expiration dates**
 - Carpenters - automatic extension of contract
 - Laborers - have settled
 - Electricians - have settled
 - Plumber - settled
 - Sheet metal - settled
 - Glass & glazing - ?
 - Roofers - ?
 - Resteel workers - no contract - still working

Masons - no contract - still working

2.4.3. School calendar dates

09/03/91 am (wd 172) - Start of school

11/28, 29/91 am (wd 234)

2.5. Laundry lists

2.5.1. Procurement

Turnaround on submittals

01 wd - e & I log in submittal and check

01 wd - e & I deliver submittal to tha

02 to 04 wd - tha check & approve submittal

01 - e & I log in submittal & review

01 - e & I return submittal to sub

Total turnaround time = 7 to 9 wd

Items to follow

Structural steel, joists, metal deck, misc iron

Shop drawings to be submitted - 10 wd

Shop drawings reviewed & approved - 7 wd

Fab & deliver - assume 20 wd for all

Fab & deliver struct steel - 10wd

Fab & deliver joists - 20 wd

Fab & deliver deck - 10 wd

Fab & deliver misc iron - 10 wd

Erection 5 to 10 working days

Underground pre insulated pipe

Shop drawings to be submitted - 10 wd

Shop drawings reviewed & approved - 7 wd

Fab & deliver - 10 wd

Fab & deliver struct steel - 10wd

Fab & deliver joists - 20 wd

Fab & deliver deck - 10 wd

Fab & deliver misc iron - 10 wd

Installation 5 to 10 working days

Gasoline tank & related systems

Shop drawings to be submitted - 5 wd

Review & approve shop drawing - 7 wd

Fab & deliver - 20 to 30 wd

Installation

Heating equipment

Shop drawings to be submitted - 10 wd

Review & approve shop drawing - 7 wd

Fab & deliver - 20 to 30 wd

Control systems - Phil Ziegler - CTI

Shop drawings to be submitted - 15 wd

Review & approve shop drawing - 10 wd

Fab & deliver - as needed - software must be prepared

Louvers

Shop drawings to be submitted - 10 wd

Review & approve shop drawing - 7 wd

Fab & deliver - 20 to 30 wd

Light fixtures

Mott Facilities Maintenance Building notes - disk 269

Shop drawings to be submitted - 10 wd
Review & approve shop drawing - 7 wd
Fab & deliver - 40 wd

Switch gear

Shop drawings to be submitted - 10 wd
Review & approve shop drawing - 7 wd
Fab & deliver - 30 wd (ITE might be 40 wd)

Lighting & power panels

Shop drawings to be submitted - 10 wd
Review & approve shop drawing - 7 wd
Fab & deliver - 30 wd

Tubs could be available in about 10 wd

Sheet metal - may not need shop drawings

Face brick

Brick has been selected
No sample wall need be built
Delivery in 5 to 10 wd after ordering

2.5.2. Main project areas

Substructure

Superstructure

Erect exterior & interior block masonry bearing walls - 10 wd
Remainder of masonry - 5 wd

Close in

1st floor

Erect ext studs & sheathing - 10 wd
Erect face brick - 20 wd
Lay insulation & roofing at upper & lower level - 10 wd
Install sheet metal coping - 5 wd at upper & lower level

Finish interior work

Lower level

1st floor level

Rough interior work

Lower level

Underground piping work - 10 wd
Underground electrical work - 5 wd after mech work
Sheet metal ductwork - 10 wd
Mechanical & heating piping - 15 wd
Rough electrical conduit & feeders - 10 wd
Interior masonry - 3 wd
Install plumbing fixtures - 3 wd
Install lighting fixtures - 10 wd
Install mechanical & electrical trim items - 5 wd
Test & balance heating and air systems - 3 wd at end of project

First floor

Sheet metal ductwork - 20 wd
Mechanical & heating piping horiz - 15 wd
Rough electrical conduit & feeders - 20 wd
Interior masonry - 3 wd
In wall mechanical & electrical work - as needed to keep up with studs
Install grills & diffusers - 3 wd

Mott Facilities Maintenance Building notes - disk 269

- Install lighting fixtures - 5 wd
- Install plumbing fixtures - 2 wd
- Install mechanical & electrical trim items - 5 wd
- Test & balance heating and air systems - 3 wd at end of project

Site work

Before building construction

- Relocate primary power service - 10 wd
- Relocate 8" gas line - 10 wd

During building construction

- Install underground insulated piping from Gorman - 5 wd
- Must be careful to maintain access

- City install water service to building - 2 wd
- Excavate, install, test & backfill ug sanitary - 2 wd
- Excavate, install, test & backfill ug storm - 10 wd
- Excavate, install, test & backfill ug duct bank - 5 wd

Power

Telephone

Communications

- Construct light pole bases - 3 wd
- Excavate, install, test & backfill ug lighting power - 3 wd
- Install light poles - 2 wd
- Install parking control devices - gates - 5 wd
- Install gas tank system - 10 wd total
 - Excavate & construct foundation for gas tank -
 - Set gas tank
 - Install gas tank piping distribution system
 - electrical - 3 wd

	activity	earliest start	earliest finish	latest start	latest finish
1	001-T/R TO JULY 3, 1991	7/3/91	7/3/91	7/3/91	7/3/91
2	009-COMP LAY OUT BUILDING & SITE & COMPLETE STRIPPING - 1	7/3/91	7/3/91	7/3/91	7/3/91
3	027-DELIVER & FAB MATERIAL FOR RELOCATED GAS LINE - 5	7/3/91	7/10/91	7/3/91	7/10/91
4	029-PREPARE & SUBMIT GASOLINE TANK & RELATED SYSTEMS SHOP DRAWINGS - 5	7/3/91	7/10/91	7/3/91	7/10/91
5	028-EXCAVATE, INSTALL & BACKFILL CONDUIT FOR RELOCATED PRIMARY POWER SERVICE - 7	7/3/91	7/12/91	7/3/91	7/12/91
6	025-PREPARE & SUBMIT SWITCHGEAR SHOP DRAWINGS - 10	7/3/91	7/17/91	7/3/91	7/17/91
7	026-PREPARE & SUBMIT UNDERGROUND PRE INSULATED SHOP DRAWINGS - 10	7/3/91	7/17/91	7/3/91	7/17/91
8	003-PREPARE & SUBMIT CUTS & SHOP DRAWINGS FOR VEHICLE LIFT - 10	7/3/91	7/17/91	7/3/91	7/17/91
9	002-PREPARE & SUBMIT STRUCT STEEL, JOIST, METAL DECK & MISC IRON SHOP DRAWINGS - 10	7/3/91	7/17/91	7/3/91	7/17/91
10	005-PREPARE & SUBMIT HEATING EQUIPMENT SHOP DRAWINGS - 10	7/3/91	7/17/91	7/23/91	8/5/91
11	023-PREPARE & SUBMIT ELEVATOR SHOP DRAWINGS - 10	7/3/91	7/17/91	8/12/91	8/23/91
12	022-PREPARE & SUBMIT POWER & LIGHTING PANEL SHOP DRAWINGS - 10	7/3/91	7/17/91	8/15/91	8/28/91
13	024-PREPARE & SUBMIT LIGHT FIXTURE SHOP DRAWINGS - 10	7/3/91	7/17/91	8/26/91	9/9/91
14	004-PREPARE & SUBMIT LOUVER SHOP DRAWINGS - 10	7/3/91	7/17/91	9/10/91	9/23/91
15	007-FAB & DELIVER FACE BRICK - 15	7/3/91	7/24/91	8/15/91	9/5/91
16	006-PREPARE & SUBMIT CONTROL SYSTEM SHOP DRAWINGS - 15	7/3/91	7/24/91	8/22/91	9/12/91
17	015-PART EXCAVATE, FORM REINF & POUR WALL & COL FOOTINGS (AT UPPER LEVEL) - 5	7/5/91	7/11/91	7/5/91	7/11/91
18	038-INSTALL RELOCATED 8" GAS LINE - 5	7/11/91	7/17/91	7/11/91	7/17/91
19	040-REVIEW & APPROVE GASOLINE TANK & RELATED SYSTEMS SHOP DRAWINGS - 7	7/11/91	7/19/91	7/11/91	7/19/91
20	021-PART EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL (AT UPPER LEVEL)- 5	7/12/91	7/18/91	7/12/91	7/18/91
21	020-COMP EXCAVATE, FORM, REINF & POUR WALL & COL FOOTINGS & ELEV PIT (AT LOWER LEVEL) - 5	7/12/91	7/18/91	7/12/91	7/18/91
22	039-PULL CABLE FOR RELOCATED PRIMARY POWER SERVICE & CONNECT - 6	7/15/91	7/22/91	7/15/91	7/22/91

activities listed in early start early finish order

	activity	earliest start	earliest finish	latest start	latest finish
2 3	036-REVIEW & APPROVE SWITCHGEAR SHOP DRAWINGS - 7	7/18/91	7/26/91	7/18/91	7/26/91
2 4	037-REVIEW & APPROVE UNDERGROUND PRE INSULATED SHOP DRAWINGS - 7	7/18/91	7/26/91	7/18/91	7/26/91
2 5	010-REVIEW & APPROVE VEHICLE LIFT CUTS & SHOP DRAWINGS - 7	7/18/91	7/26/91	7/18/91	7/26/91
2 6	008-REVIEW & APPROVE STRUCT STEEL, JOIST, METAL DK & MISC IRON SHOP DRAWINGS - 7	7/18/91	7/26/91	7/18/91	7/26/91
2 7	012-REVIEW & APPROVE HEATING EQUIPMENT SHOP DRAWINGS - 7	7/18/91	7/26/91	8/6/91	8/14/91
2 8	034-REVIEW & APPROVE ELEVATOR SHOP DRAWINGS - 7	7/18/91	7/26/91	8/26/91	9/4/91
2 9	033-REVIEW & APPROVE POWER & LIGHTING PANEL SHOP DRAWINGS - 7	7/18/91	7/26/91	8/29/91	9/9/91
3 0	035-REVIEW & APPROVE LIGHT FIXTURE SHOP DRAWINGS - 7	7/18/91	7/26/91	9/10/91	9/18/91
3 1	011-REVIEW & APPROVE LOUVER SHOP DRAWINGS - 7	7/18/91	7/26/91	9/24/91	10/2/91
3 2	032-PART FINE GRADE, SET IN FLOOR WORK & POUR FIRST FLOOR SLAB ON GRADE (UPPER LEVEL) - 4	7/19/91	7/24/91	7/29/91	8/1/91
3 3	030-PART ERECT LOWER LEVEL BEARING MASONRY BLOCK - 5	7/19/91	7/25/91	7/26/91	8/1/91
3 4	031-COMP EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL (AT LOWER LEVEL) - 10	7/19/91	8/1/91	7/19/91	8/1/91
3 5	060-ACTIVATE RELOCATED PRIMARY POWER SERVICE - ON WEEKEND	7/22/91	7/22/91	7/22/91	7/22/91
3 6	061-FAB & DELIVER GASOLINE TANK & RELATED SYSTEMS COMPONENTS - 25	7/22/91	8/23/91	7/22/91	8/23/91
3 7	013-REVIEW & APPROVE CONTROL SYSTEM SHOP DRAWINGS - 10	7/25/91	8/7/91	9/13/91	9/26/91
3 8	051-COMP ERECT LOWER LEVEL IN WALL FRAMES & BEARING MASONRY BLOCK - 5	7/26/91	8/1/91	8/19/91	8/23/91
3 9	016-CONSTRUCT VEHICLE LIFT PITS - 4	7/29/91	8/1/91	7/29/91	8/1/91
4 0	058-FAB & DELIVER UNDERGROUND PRE INSULATED PIPE - 10	7/29/91	8/9/91	7/29/91	8/9/91
4 1	014-FAB & DELIVER EARLY STRUCT STEEL, JOISTS, METAL DECK & MISC IRON - 20	7/29/91	8/23/91	7/29/91	8/23/91
4 2	017-FAB & DELIVER LOUVERS - 25	7/29/91	8/30/91	10/3/91	11/6/91
4 3	018-FAB & DELIVER EARLY HEATING SYSTEM COMPONENTS - 30	7/29/91	9/9/91	8/15/91	9/26/91
4 4	054-FAB & DELIVER POWER & LIGHT PANELS - 30	7/29/91	9/9/91	9/10/91	10/21/91

activities listed in early start early finish order

	activity	earliest start	earliest finish	latest start	latest finish
4 5	057-FAB & DELIVER SWITCHGEAR - 40	7/29/91	9/23/91	7/29/91	9/23/91
4 6	055-FAB & DELIVER EARLY ELEVATOR COMPONENTS - 40	7/29/91	9/23/91	9/5/91	10/30/91
4 7	056-FAB & DELIVER LIGHT FIXTURES - 40	7/29/91	9/23/91	9/19/91	11/13/91
4 8	052-INSTALL UG SERVICES TO VEHICLE LIFT - 2	8/2/91	8/5/91	8/6/91	8/7/91
4 9	053-CONT(1) FINE GRADE, SET IN FLOOR WORK & POUR FLOOR SLAB ON GRADE (LOWER LEVEL) - 4	8/2/91	8/7/91	8/2/91	8/7/91
5 0	019-FAB & DELIVER EARLY CONTROL SYSTEM COMPONENTS - AS NEEDED	8/7/91	8/7/91	9/27/91	9/27/91
5 1	063COMP SET IN FLOOR WORK & POUR FLOOR SLAB ON GRADE (LOWER LEVEL) - 2	8/8/91	8/9/91	8/8/91	8/9/91
5 2	080-INSTALL LOWER LEVEL MAN DOORS & HARDWARE - 3	8/12/91	8/14/91	8/12/91	8/14/91
5 3	065-INSTALL UNDERGROUND PRE INSULATED PIPE - 10	8/12/91	8/23/91	8/12/91	8/23/91
5 4	062-ERECT, PLUMB & DETAIL STRUCT STEEL, JOISTS & METAL DECK - 8	8/26/91	9/5/91	8/26/91	9/5/91
5 5	069-FORM, REINF & POUR 1ST LEVEL SUPPORTED DECK - 2	9/6/91	9/9/91	9/18/91	9/19/91
5 6	070-LAY INSULATION ROOFING AT FIRST FLOOR ROOF TO HORIZ DRY IN - 5	9/6/91	9/12/91	9/6/91	9/12/91
5 7	068-ERECT 1ST FLOOR EXT STUDS, IN WALL WORK & SHEATHING -	9/6/91	9/19/91	9/6/91	9/19/91
5 8	078-ERECT 1ST FLOOR INT MASONRY - 3	9/10/91	9/12/91	10/17/91	10/21/91
5 9	076-PART INSTALL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 8	9/10/91	9/19/91	10/4/91	10/15/91
6 0	075-PART INSTALL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 10	9/10/91	9/23/91	9/27/91	10/10/91
6 1	077-PART INSTALL ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 10	9/10/91	9/23/91	9/27/91	10/10/91
6 2	084-COMP INSTALL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 7	9/20/91	9/30/91	10/16/91	10/24/91
6 3	072-PART ERECT FACE BRICK AT LOWER & 1ST FLOOR LEVELS - 10	9/20/91	10/3/91	9/20/91	10/3/91
6 4	086-PART INSTALL 1ST FL INT METAL STUDS & IN WALL WORK - 3	9/24/91	9/26/91	10/22/91	10/24/91
6 5	085-COMP INSTALL FIRST FLOOR ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 10	9/24/91	10/7/91	10/11/91	10/24/91
6 6	083-COMP INSTALL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 10	9/24/91	10/7/91	10/11/91	10/24/91

activities listed in early start early finish order

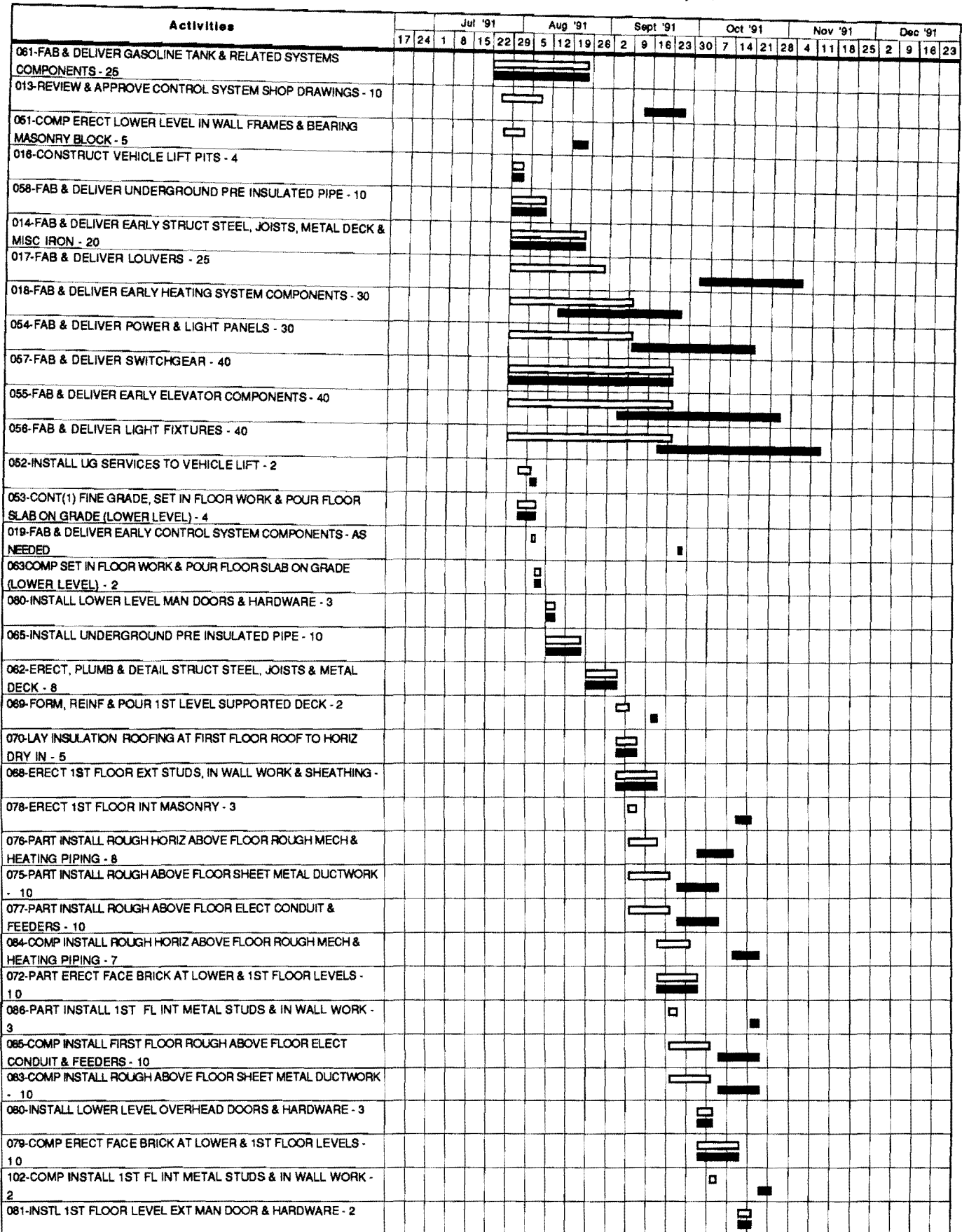
	activity	earliest start	earliest finish	latest start	latest finish
67	080-INSTALL LOWER LEVEL OVERHEAD DOORS & HARDWARE - 3	10/4/91	10/8/91	10/4/91	10/8/91
68	079-COMP ERECT FACE BRICK AT LOWER & 1ST FLOOR LEVELS - 10	10/4/91	10/17/91	10/4/91	10/17/91
69	102-COMP INSTALL 1ST FL INT METAL STUDS & IN WALL WORK - 2	10/8/91	10/9/91	10/25/91	10/28/91
70	081-INSTL 1ST FLOOR LEVEL EXT MAN DOOR & HARDWARE - 2	10/18/91	10/21/91	10/18/91	10/21/91
71	087-PART CLEAN FACE BRICK - 2	10/18/91	10/21/91	10/18/91	10/21/91
72	082-LAY INSULATION & ROOFING AT LOWER LEVEL - 5	10/18/91	10/24/91	10/18/91	10/24/91
73	104-COMP CLEAN FACE BRICK - 3	10/22/91	10/24/91	11/4/91	11/6/91
74	103-INSTALL & GLAZE 1ST FLOOR EXTERIOR SASH & ENTRIES - 5	10/22/91	10/28/91	10/22/91	10/28/91
75	107-INSTALL LOUVERS - ?	10/24/91	10/24/91	11/7/91	11/7/91
76	089-COMP INSTL ROOFING TRIM, FLASHINGS & COPINGS - 5	10/25/91	10/31/91	10/25/91	10/31/91
77	090-INSTALL ELEVATOR COMPLETE - 15	10/25/91	11/14/91	10/31/91	11/20/91
78	106-HANG, TAPE & SAND 1ST FLOOR INT DRY WALL - 7	10/29/91	11/6/91	10/29/91	11/6/91
79	108-PART PAINT 1ST FL REQD INT SURFACES - 2	11/7/91	11/8/91	11/7/91	11/8/91
80	109-CONT(1) PAINT 1ST FLOOR REQD SURFACES - 2	11/11/91	11/12/91	11/19/91	11/20/91
81	111-TALL 1ST FLOOR ACOUSTIC CEILING GRID - 3	11/11/91	11/13/91	11/11/91	11/13/91
82	110-INSTL TOILET ROOM FIXTURES, MIRRORS & ACCESSORIES AT 1ST FLOOR - 4	11/11/91	11/14/91	11/20/91	11/25/91
83	112-INSTL 1ST FLOOR MILLWORK, CHALKBDS, BULL BDS & MAILBOXES - 5	11/11/91	11/15/91	11/21/91	11/27/91
84	113-INSTALL 1ST FLOOR DOORS & HARDWARE - 5	11/13/91	11/19/91	11/21/91	11/27/91
85	116-INSTL 1ST FLOOR CEILING GRILLS & DIFFUSERS - 3	11/14/91	11/18/91	11/18/91	11/20/91
86	115-INSTALL 1ST FLOOR CEILING LIGHT FIXTURES - 5	11/14/91	11/20/91	11/14/91	11/20/91
87	114-COMP PAINT 1ST FLOOR REQD SURFACES - 2	11/15/91	11/18/91	11/26/91	11/27/91
88	117-INSTALL ACOUSTIC CEILING PANELS - 2	11/21/91	11/22/91	11/26/91	11/27/91

activities listed in early start early finish order

	activity	earliest start	earliest finish	latest start	latest finish
89	118-INSTL ARCH, MECH & ELECT TRIM ITEMS - 5	11/21/91	11/27/91	11/21/91	11/27/91
90	119-LAY 1ST FLOOR RESILIENT TILE & BASE - 4	11/29/91	12/4/91	11/29/91	12/4/91
91	120-CLEAN UP 1ST FLOOR & MOVE OUT - 2	12/5/91	12/6/91	12/5/91	12/6/91

activities listed in early start early finish order

Activities	Jul '91		Aug '91				Sept '91				Oct '91				Nov '91				Dec '91									
	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23
001-T/R TO JULY 3, 1991																												
009-COMP LAY OUT BUILDING & SITE & COMPLETE STRIPPING - 1																												
027-DELIVER & FAB MATERIAL FOR RELOCATED GAS LINE - 5																												
029-PREPARE & SUBMIT GASOLINE TANK & RELATED SYSTEMS SHOP DRAWINGS - 5																												
028-EXCAVATE, INSTALL & BACKFILL CONDUIT FOR RELOCATED PRIMARY POWER SERVICE - 7																												
025-PREPARE & SUBMIT SWITCHGEAR SHOP DRAWINGS - 10																												
026-PREPARE & SUBMIT UNDERGROUND PRE INSULATED SHOP DRAWINGS - 10																												
003-PREPARE & SUBMIT CUTS & SHOP DRAWINGS FOR VEHICLE LIFT - 10																												
002-PREPARE & SUBMIT STRUCT STEEL, JOIST, METAL DECK & MISC IRON SHOP DRAWINGS - 10																												
005-PREPARE & SUBMIT HEATING EQUIPMENT SHOP DRAWINGS - 10																												
023-PREPARE & SUBMIT ELEVATOR SHOP DRAWINGS - 10																												
022-PREPARE & SUBMIT POWER & LIGHTING PANEL SHOP DRAWINGS - 10																												
024-PREPARE & SUBMIT LIGHT FIXTURE SHOP DRAWINGS - 10																												
004-PREPARE & SUBMIT LOUVER SHOP DRAWINGS - 10																												
007-FAB & DELIVER FACE BRICK - 15																												
006-PREPARE & SUBMIT CONTROL SYSTEM SHOP DRAWINGS - 15																												
015-PART EXCAVATE, FORM REINF & POUR WALL & COL FOOTINGS (AT UPPER LEVEL) - 5																												
038-INSTALL RELOCATED 8" GAS LINE - 5																												
040-REVIEW & APPROVE GASOLINE TANK & RELATED SYSTEMS SHOP DRAWINGS - 7																												
021-PART EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL (AT UPPER LEVEL) - 5																												
020-COMP EXCAVATE, FORM, REINF & POUR WALL & COL FOOTINGS & ELEV PIT (AT LOWER LEVEL) - 5																												
039-PULL CABLE FOR RELOCATED PRIMARY POWER SERVICE & CONNECT - 6																												
036-REVIEW & APPROVE SWITCHGEAR SHOP DRAWINGS - 7																												
037-REVIEW & APPROVE UNDERGROUND PRE INSULATED SHOP DRAWINGS - 7																												
010-REVIEW & APPROVE VEHICLE LIFT CUTS & SHOP DRAWINGS - 7																												
008-REVIEW & APPROVE STRUCT STEEL, JOIST, METAL DK & MISC IRON SHOP DRAWINGS - 7																												
012-REVIEW & APPROVE HEATING EQUIPMENT SHOP DRAWINGS - 7																												
034-REVIEW & APPROVE ELEVATOR SHOP DRAWINGS - 7																												
033-REVIEW & APPROVE POWER & LIGHTING PANEL SHOP DRAWINGS - 7																												
035-REVIEW & APPROVE LIGHT FIXTURE SHOP DRAWINGS - 7																												
011-REVIEW & APPROVE LOUVER SHOP DRAWINGS - 7																												
032-PART FINE GRADE, SET IN FLOOR WORK & POUR FIRST FLOOR SLAB ON GRADE (UPPER LEVEL) - 4																												
030-PART ERECT LOWER LEVEL BEARING MASONRY BLOCK - 5																												
031-COMP EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL (AT LOWER LEVEL) - 10																												
060-ACTIVATE RELOCATED PRIMARY POWER SERVICE - ON WEEKEND																												



Activities	Jul '91				Aug '91				Sept '91				Oct '91				Nov '91				Dec '91							
	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23
087-PART CLEAN FACE BRICK - 2																												
082-LAY INSULATION & ROOFING AT LOWER LEVEL - 5																												
104-COMP CLEAN FACE BRICK - 3																												
103-INSTALL & GLAZE 1ST FLOOR EXTERIOR SASH & ENTRIES - 5																												
107-INSTALL LOUVERS - ?																												
089-COMP INSTL ROOFING TRIM, FLASHINGS & COPINGS - 5																												
090-INSTALL ELEVATOR COMPLETE - 15																												
106-HANG, TAPE & SAND 1ST FLOOR INT DRY WALL - 7																												
108-PART PAINT 1ST FL REQD INT SURFACES - 2																												
109-CONT(1) PAINT 1ST FLOOR REQD SURFACES - 2																												
111-TALL 1ST FLOOR ACOUSTIC CEILING GRID - 3																												
110-INSTL TOILET ROOM FIXTURES, MIRRORS & ACCESSORIES AT 1ST FLOOR - 4																												
112-INSTL 1ST FLOOR MILLWORK, CHALKBDS, BULL BDS & MAILBOXES - 5																												
113-INSTALL 1ST FLOOR DOORS & HARDWARE - 5																												
116-INSTL 1ST FLOOR CEILING GRILLS & DIFFUSERS - 3																												
115-INSTALL 1ST FLOOR CEILING LIGHT FIXTURES - 5																												
114-COMP PAINT 1ST FLOOR REQD SURFACES - 2																												
117-INSTALL ACOUSTIC CEILING PANELS - 2																												
118-INSTL ARCH, MECH & ELECT TRIM ITEMS - 5																												
119-LAY 1ST FLOOR RESILIENT TILE & BASE - 4																												
120-CLEAN UP 1ST FLOOR & MOVE OUT - 2																												

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
August 8, 1991

Subject: Monitoring Report #2
Mott Facilities Maintenance Building
Mott Community College
Flint, Michigan

From: Ralph J. Stephenson PE

Project: 91:29

Data disk: d270 rjs

Date of Monitoring: August 6, 1991 (wd 153)

Monitored from:

- Sheet #1, Issue #1 network model dated July 3, 1991 (wd 130)

Key dates:

- June 25, 1991 (wd 124) - Letter of intent issued
- June 26, 1991 (wd 125) - Mobilize & move on site
- September 3, 1991 (wd 172) - Start of school for fall
- December 13, 1991 (wd 245) - Contract completion date

Total working days remaining on contract work from August 6, 1991 = 245 - 153 = 92

Actions taken:

- Inspected project with Mr. Wallace, Mr. Paul & Mr. Harburn
- Evaluated current project status
- Updated network model from monitoring evaluation
- Continued preparing network model for remaining work on project

General Summary:

As of August 6, 1991 (wd 153) much of the foundation work at the upper and lower levels is in place. At the lower level there is a detail and dimensional problem to be worked out at the elevator pit to allow completing foundation work. This matter will be resolved soon.

We discussed the sequence of steel erection in detail so as to set the method by which the bearing walls at the lower level can be completed. Columns supporting the high roof are located in these walls and the walls must be erected early to

Ralph J. Stephenson PE PC

Consulting Engineer

323 Hiawatha Drive

Mt. Pleasant, MI 48858

ph 517 772 2537

August 8, 1991

receive joists at the first supported floor. Mr. Wallace and his structural steel contractor are discussing this matter now.

For now we are assuming that structural steel will be delivered on August 23, 1991 (wd 166) and that the embedded columns supporting the roof will be erected first. Next the lower level bearing walls supporting first floor structural framing will be erected and then the remainder of the structural steel will be erected and trimmed. We will discuss this sequence in detail at our next planning and monitoring session.

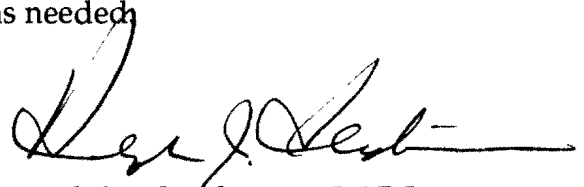
The primary power service has been relocated and was activated on August 3, 1991 (wd 152). The gas line has also been relocated.

There was no word on when the hoist pit would be built. Apparently the lift manufacturer is to install the pit. I recommend this action be given early attention since the pit construction and installation of services could be somewhat disruptive to installation of remaining underground utilities and construction of lower level slabs on grade.

We next made a brief analysis of procurement status. Procurement is in fair condition, and all submittals sent to the architect/engineer's office have apparently been approved and returned to the contractor according to Mr. Harburn. Since this is a short project timely procurement is critical to field work continuity. We will make a thorough review of submittals, approvals, fabrication and delivery at our next planning session.

To complete planning on the project as soon as possible I shall set a diagramming meeting in the very near future and will contact Mr. Forsmark directly to establish a mutually satisfactory date. At this session we should complete diagramming the upper and lower level interior work and the site work.

This report is being sent to Mr. Bert Forsmark, Mr. Jerry Harburn and Mr. Junior Paul. Further distribution will be made by them as needed.



Ralph J. Stephenson PE PC

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
August 17, 1991

Subject: Monitoring Report #3
Mott Facilities Maintenance Building
Mott Community College
Flint, Michigan

From: Ralph J. Stephenson PE

Project: 91:29

Data disk: d270 rjs

Date of Monitoring: August 14, 1991 (wd 159)

Monitored from:

- Sheet #1, Issue #1 network model dated July 3, 1991 (wd 130)

Key dates:

- June 25, 1991 (wd 124) - Letter of intent issued
- June 26, 1991 (wd 125) - Mobilize & move on site
- September 3, 1991 (wd 172) - Start of school for fall
- December 13, 1991 (wd 245) - Contract completion date

Total working days remaining on contract work from August 14, 1991 = 245 - 159 = 86

Actions taken:

- Reviewed current project status with Mr. Bert Forsmark & Mr. Al Wallace
- Completed updating network model to issue #3, dated August 14, 1991 (wd 159)
- Made brief inspection of project

General Summary:

The primary purpose of our session today was to complete updating the network model to reflect project status as of August 14, 1991 (wd 159). I reviewed the current condition of the job with Mr. Forsmark early in the morning, and later with both Mr. Wallace and Mr. Forsmark.

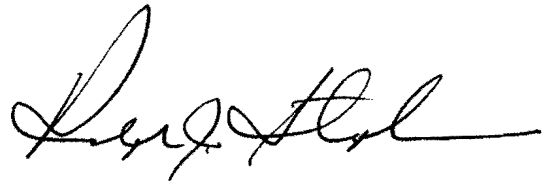
Structural steel columns embedded in the lower level masonry bearing walls have

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
August 17, 1991

been delivered which allowed them to be set, releasing ongoing work on interior lower level masonry. It is assumed that remaining structural steel, joists and metal deck will be on the job by August 20, 1991 (wd 163) and that erection will proceed as soon as the necessary bearing walls are complete.

Mr. Forsmark and I also completed network planning for interior work at the lower and upper levels, and for site work. Enclosed with this report is the sheet #1, issue #3 network plan of work prepared during the session. Also enclosed is a bar chart translation derived from the network.

This report, the network model and the bar chart translation are being sent to Mr. Bert Forsmark, Mr. Jerry Harburn and Mr. Junior Paul. Further distribution will be made by them as needed.

A handwritten signature in cursive script, appearing to read 'Ralph J. Stephenson', written in black ink.

Ralph J. Stephenson PE PC

Activities	Aug '91				Sept '91					Oct '91				Nov '91				Dec '91				
	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	
001-T/R TO ISSUE #2 UPDATE AUGUST 6, 1991	■																					
019-FAB & DELIVER EARLY CONTROL SYSTEM COMPONENTS - AVAILABLE AS NEEDED	■																					
058-FAB & DELIVER UNDERGROUND PRE INSULATED PIPE - 4	□	■																				
016-CONSTRUCT VEHICLE LIFT PITS - 4	□																					
003-COMP PREPARE & SUBMIT LOUVER SHOP DRAWINGS - 5	□																					
035-COMP REVIEW & APPROVE LIGHT FIXTURE SHOP DRAWINGS - 5	□																					
123-COMP EXCAV, INSTL, TEST & BKFL SITE UNDERGROUND STORM SEWER LINE - 10	□	■																				
061-FAB & DELIVER GASOLINE TANK & RELATED SYSTEMS COMPONENTS - 14	□	■																				
018-FAB & DELIVER EARLY HEATING SYSTEM COMPONENTS - 22	□	■																				
007-FAB & DELIVER FACE BRICK - 24	□	■																				
054-FAB & DELIVER POWER & LIGHT PANELS - 24	□	■																				
057-FAB & DELIVER SWITCHGEAR - 34	□	■																				
055-FAB & DELIVER EARLY ELEVATOR COMPONENTS - 34	□	■																				
065-INSTALL UNDERGROUND PRE INSULATED PIPE - 10	□	■																				
004-REVIEW & APPROVE LOUVER SHOP DRAWINGS - 7	□																					
056-FAB & DELIVER LIGHT FIXTURES - 29	□	■																				
002-T/R TO AUGUST 14, 1991 - ISSUE #3 UPDATE	■																					
014-FAB & DELIVER REMAINDER OF STRUCT STEEL, JOISTS, METAL DECK & MISC IRON - 5	□	■																				
030-COMP ERECT LOWER LEVEL BEARING MASONRY - 8	□	■																				
124-CITY OF FLINT INSTALL WATER SERVICE TO FACILITIES & MAINTENANCE BUILDING - 2	□																					
125-EXCAV, INSTL, TEST & BKFL SITE UNDERGROUND SANITARY SEWER LINE - 2	□																					
017-FAB & DELIVER LOUVER - 25	□	■																				
127-CONSTRUCT SITE LIGHT POLE BASES - 2	□																					
005-COMP ERECT, PLUMB & TRIM STRUCTURAL STEEL, JOISTS & METAL DECK AT LOWER LEVEL - 4	□	■																				
126-MASS EXCAVATE, FORM, REINF & POUR FOUNDATION FOR GASOLINE TANK - 5	□	■																				
006-SUBSTANT COMP WATERPROOF, LAY DRAIN TILE & PART BACKFILL UPPER & LOWER LEVEL FOOTINGS & WALLS - 5	□	■																				
031-COMP EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL AT LOWER LEVEL - 10	□	■																				
129-EXCAVATE, INSTL, TEST & BKFL SITE UNDERGROUND LIGHTING POWER LINES - 3	□	■																				
042-ERECT, PLUMB & TRIM STRUCT STEEL, JOISTS & METAL DECK AT UPPER LEVEL - 4	□	■																				
128-SET UNDERGROUND GAS TANK & ROUGH BACKFILL AT TANKS - 2	□	■																				
021-EXCAVATE, INSTL, TEST & BACKFILL UNDERGROUND MECH & ELECT UTIL AT UPPER LEVEL - 5	□	■																				
130-INSTALL GAS TANK SERVICE PIPING AND ELECTRICAL - 3	□	■																				

• Unshaded bars are early starts & early finishes
 • Shaded bars are late starts & late finishes

Activities	Aug '91				Sept '91					Oct '91				Nov '91				Dec '91				
	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	
069-FORM, REINF & POUR 1ST LEVEL SUPPORTED DECK - 2					□		■															
043-ERECT STEEL STAIRS & FILL TREADS - 2					□																	
070-LAY INSULATION ROOFING AT FIRST FLOOR ROOF TO HORIZ DRY IN - 5					□																	
068-ERECT 1ST FLOOR EXT STUDS, IN WALL WORK & SHEATHING -					□																	
131-INSTALL EXT CURBS & GUTTERS - 2					□																	
052-INSTALL UG SERVICES TO VEHICLE LIFT - 2					□																	
032-PART FINE GRADE, SET IN FLOOR WORK & POUR FIRST FLOOR SLAB ON GRADE (UPPER LEVEL) - 4					□																	
132-CONSTRUCT CONCRETE SIDEWALKS - 2					□																	
134-INSTALL SITE LIGHT POLES - 2					□																	
133-INSTALL & COMPACT ASPHALT PAVING SUBBASE - 3					□																	
078-ERECT 1ST FLOOR INT MASONRY - 3					□																	
053-CONT(1) FINE GRADE, SET IN FLOOR WORK & POUR FLOOR SLAB ON GRADE (LOWER LEVEL) - 4					□																	
076-PART INSTALL 1ST FL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 8					□																	
075-PART INSTALL 1ST FL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 10					□																	
077-PART INSTALL 1ST FL ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 10					□																	
135-LAY ASPHALT BASE COURSE - 1					□																	
136-LAY ASPHALT WEARING COURSE - 1					□																	
138-STRIPE ASPHALT PAVING AREAS - 1					□																	
139-LANDSCAPE REQUIRED AREAS - 3					□																	
137-INSTALL PARKING CONTROL DEVICES & GATES - 5					□																	
063-COMP SET IN FLOOR WORK & POUR FLOOR SLAB ON GRADE (LOWER LEVEL) - 2					□																	
072-PART ERECT FACE BRICK AT LOWER & 1ST FLOOR LEVELS - 10					□																	
047-ERECT LOWER LEVEL INT MASONRY - 3					□																	
046-PART INSTALL LOWER LEVEL ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 5					□																	
075-PART INSTALL 1ST FL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 5					□																	
048-INSTALL HOIST EQUIPMENT - 5					□																	
045-PART INSTALL LOWER LEVEL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 8					□																	
140-CLEAN UP SITE WORK - 4					□																	
084-COMP INSTALL 1ST FL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 7					□																	
086-PART INSTALL 1ST FL INT METAL STUDS & IN WALL WORK - 3					□																	
085-COMP INSTALL 1ST FL FIRST FLOOR ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 10					□																	
083-COMP INSTALL 1ST FL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 10					□																	

Activities	Aug '91				Sept '91				Oct '91				Nov '91				Dec '91				
	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23
049-COMP INSTALL LOWER LEVEL ROUGH ABOVE FLOOR SHEET METAL DUCTWORK - 5																					
091-COMP INSTALL LOWER LEVEL FIRST FLOOR ROUGH ABOVE FLOOR ELECT CONDUIT & FEEDERS - 5																					
080-INSTALL LOWER LEVEL OVERHEAD DOORS & HARDWARE - 3																					
092-INSTALL LOWER LEVEL HARD CEILING SUSP & FRAMING - 3																					
050-COMP INSTALL LOWER LEVEL ROUGH HORIZ ABOVE FLOOR ROUGH MECH & HEATING PIPING - 7																					
079-COMP ERECT FACE BRICK AT LOWER & 1ST FLOOR LEVELS - 10																					
102-COMP INSTALL 1ST FL INT METAL STUDS & IN WALL WORK - 2																					
081-INSTL 1ST FLOOR LEVEL EXT MAN DOOR & HARDWARE - 2																					
087-PART CLEAN ALL FACE BRICK - 2																					
080-INSTALL LOWER LEVEL MAN DOORS & HARDWARE - 3																					
082-LAY INSULATION & ROOFING AT LOWER LEVEL TO HORIZ DRY IN - 5																					
104-COMP CLEAN FACE BRICK - 3																					
103-INSTALL & GLAZE 1ST FLOOR EXTERIOR SASH & ENTRIES - 5																					
107-INSTALL LOUVER - 1																					
093-HANG, TAPE & SAND LOWER LEVEL CEILING INT DRY WALL - 5																					
089-COMP INSTL ROOFING TRIM, FLASHINGS & COPINGS - 5																					
090-INSTALL ELEVATOR COMPLETE - 15																					
106-HANG, TAPE & SAND 1ST FLOOR INT DRY WALL - 7																					
094-PART PAINT REQD INT SURFACES AT LOWER LEVEL - 2																					
095-CONT(1) PAINT REQD SURFACES AT LOWER LEVEL - 2																					
096-INSTL PLUMBING FIXTURES & TOILET ROOM MIRRORS & ACCESSORIES AT LOWER LEVEL - 3																					
098-INSTALL WIRE MESH PARTITIONS - 1																					
108-PART PAINT 1ST FL REQD INT SURFACES - 2																					
152-INSTALL LOWER LEVEL LOCKERS - 2																					
097-INSTALL LOWER LEVEL CEILING LIGHT FIXTURES - 5																					
099-INSTALL LOWER LEVEL DOORS, HARDWARE, MILLWORK & TRIM - 5																					
100-COMP PAINT REQD SURFACES AT LOWER LEVEL - 2																					
RELOCATE OWNER'S DISPATCH DESK - 1																					
109-CONT(1) PAINT 1ST FLOOR REQD SURFACES - 2																					
111-INSTALL 1ST FLOOR ACOUSTIC CEILING GRID - 3																					
110-INSTL TOILET ROOM FIXTURES, MIRRORS & ACCESSORIES AT 1ST FLOOR - 4																					
112-INSTL 1ST FLOOR MILLWORK, CHALKBDS, BULL BDS & MAILBOXES - 5																					

Activities	Aug '91				Sept '91				Oct '91				Nov '91				Dec '91				
	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23
113-INSTALL 1ST FLOOR DOORS & HARDWARE - 5																					
116-INSTL 1ST FLOOR CEILING GRILLS & DIFFUSERS - 3																					
115-INSTALL 1ST FLOOR CEILING LIGHT FIXTURES - 5																					
122-INSTL ARCH, MECH & ELECT TRIM ITEMS & CHAIN FALL - 5																					
114-COMP PAINT 1ST FLOOR REQD SURFACES - 2																					
152-CLEAN UP & MOVE OUT OF LOWER LEVEL - 2																					
117-INSTALL ACOUSTIC CEILING PANELS - 2																					
118-INSTL ARCH, MECH & ELECT TRIM ITEMS - 5																					
119-LAY 1ST FLOOR RESILIENT TILE & BASE - 4																					
120-CLEAN UP 1ST FLOOR & MOVE OUT - 2																					

- Unshaded bars are early starts & early finishes
- Shaded bars are late starts & late finishes

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
September 14, 1991

Subject: Monitoring Report #4
Mott Facilities Maintenance Building
Mott Community College
Flint, Michigan

From: Ralph J. Stephenson PE

Project: 91:29

Data disk: d270 rjs

Date of Monitoring: September 11, 1991 (wd 178)

Monitored from:

- Sheet #1, Issue #3 network model dated August 14, 1991 (wd 159)

Key dates:

- June 25, 1991 (wd 124) - Letter of intent issued
- June 26, 1991 (wd 125) - Mobilize & move on site
- September 3, 1991 (wd 172) - Start of school for fall
- December 13, 1991 (wd 245) - Contract completion date

Total working days remaining on contract work from September 11, 1991 = 245 - 178 = 67

Actions taken:

- Reviewed current project status with Mr. Al Wallace and Mr. Jerry Harburn
- Inspected project with Mr. Wallace
- Evaluated project status

General Summary:

In general, the project lags about six working days in construction of the superstructure and close in of the building, and about six working days on installation of site underground services.

Procurement for most elements of the project is in fair condition except for brick. Brick was due on the job at an early date of September 9, 1991 (176) with a late

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
September 14, 1991

delivery date of September 19, 1991 (184). However Mr. Wallace points out that masonry erection may restrain portions of site paving and therefore he desires to get site work complete at as early a date as possible.

Erection of face brick could be started at the lower level as soon as materials arrive on the site. Brick is being fired in Ohio this week and should start arriving about September 20, 1991. Erection could start by September 23, 1991 (wd 186).

Procurement of mechanical and electrical components was not monitored fully at this session but Mr. Wallace feels that these materials and equipment will be available as needed. I suggest a careful review of the outstanding mechanical and electrical material and equipment delivery items be made soon.

As of September 11, 1991 (178), block masonry is substantially complete, structural steel is erected and nearly all trimmed out, and metal deck is being placed and welded.

The first floor and the lower level slab areas are being filled and graded for start of slab on grade work. At the lower level installation of the vehicle lift pit has not yet begun. However, Mr. Wallace said the vehicle equipment contractor expects to start on the pit by about September 13, 1991. The late start of this operation is shown at September 20, 1991 (185). Lower level slab on grade work can be done early in selected areas except at, and around, the vehicle pit.

The exterior gasoline storage tank has been set and is being backfilled. Most site underground piping is installed and the only remaining underground work to be completed is for the site lighting system. The current completion date for all site work is shown as the pm of October 1, 1991 (193). With the current lag this completion date could be as late as October 9, 1991 (199).

Critical points to watch in the near future include start of brick erection, and the closely related installation of insulation and roofing. We assumed in the current job plan that putting the building in the dry horizontally could possibly be done at the first floor as soon as the metal deck was installed and detailed after which the roofing could be laid and then flashed in later. At the lower level, face brick masonry is shown restraining the start of roofing over the lower level.

There is considerable stud and dry wall work at both the exterior and interior of the building and it is important that any restraints on the start of this operation be eliminated as soon as possible. Exterior studs and dry wall at the upper level were

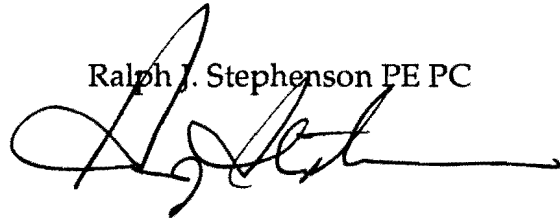
Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
September 14, 1991

due to be started on September 6, 1991 (175). There is no current word on when this work is to begin.

Interior stud work is to begin as soon as the supported slabs and the slabs on grade are installed. Stud and dry wall installation unlock most interior finish work particularly at the first level. This operation should be tracked carefully.

This monitoring report is being sent to Mr. Bert Forsmark, Mr. Jerry Harburn and Mr. Junior Paul. Further distribution will be by them as desired.

Ralph J. Stephenson PE PC

A handwritten signature in black ink, appearing to read 'R. Stephenson', written over the typed name.

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
November 22, 1991

Subject: Monitoring Report #5
Mott Facilities Maintenance Building
Mott Community College
Flint, Michigan

From: Ralph J. Stephenson PE

Project: 91:29

Data disk: d270 rjs

Date of Monitoring: November 12, 1991 (wd 222)

Monitored from:

- Sheet #1, Issue #3 network model dated August 14, 1991 (wd 159)

Key dates:

- June 25, 1991 (wd 124) - Letter of intent issued
- June 26, 1991 (wd 125) - Mobilize & move on site
- September 3, 1991 (wd 172) - Start of school for fall
- December 13, 1991 (wd 245) - Contract completion date

Total working days remaining on contract work from November 12, 1991 = 245 - 222 = 23

Actions taken:

- Reviewed current project status with Mr. Al Wallace, Mr. Jerry Harburn and Mr. Junior Paul.
- Inspected project with Mr. Wallace, Mr. Harburn and Mr. Paul.
- Evaluated project status.
- Updated issue #3 sheet #1, to issue #4, dated November 12, 1991 (wd 222).
- Discussed project status with Mr. Dave Anthony by phone, and Mr. Al Wallace.

General Summary:

Overall, the project currently lags the issue #3 network model late starts and late finishes by about 15 working days at the upper level, and by about 25 working days at the lower level. However, since the issue #3 completion date targets were set

Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, MI 48858
ph 517 772 2537
November 22, 1991

earlier than the contract date of December 13, 1991 pm (wd 245), the lag is actually about 10 working days at the upper level, and about 11 working days at the lower level.

The lag at the upper level is mainly in installation of interior metal studs and dry wall. Metal stud work was due to begin by October 22, 1991 (wd 207). It is just getting into full production as of November 12, 1991 (wd 222).

At the lower level interior overhead rough work is the major source of the lag. This work was to have been completed by no later than October 24, 1991 pm (wd 210). It is still in progress.

In light of the lag and the nearness of the target completion date it was decided that the network should be updated. This was done in conjunction with the project team. The new completion dates in the issue #4 network model are the pm of December 26, 1991 (wd 253) for the upper level, and the pm of December 19, 1991 (wd 249) for the lower level. It was decided by the project team to issue the updated network models with the later dates.

There still are problem areas currently being resolved. One of the more important is elevator delivery and installation. The late start of elevator installation work was set at October 31, 1991 (wd 214) in the issue #3 network. The elevator is currently to be delivered by November 15, 1991 (wd 225). Mr. Wallace will check further on the status of delivery.

Installation of the auto hoist at the lower level is still pending, although all hoist equipment is on the job. There was no word on when the hoist installation would begin. We assumed in the updating that it could start any time and must be complete prior to completing final trim work.

Site work has proceeded relatively well since the previous monitoring. The base course of asphalt has been placed, sidewalks are built, light poles are in place and rough grading is being completed. It was decided at our meeting that the wearing course could probably be installed next spring if weather did not allow its completion this year. In the updating we have shown the wearing course being installed starting in April, 1992.

Some problems have been encountered with the structural steel and exterior masonry at the upper level overhang. The matter has been addressed and a decision made as to what corrective measures will be taken.

Ralph J. Stephenson PE PC

Consulting Engineer

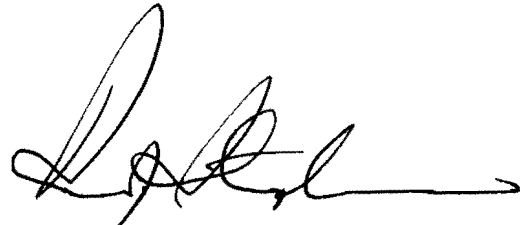
323 Hiawatha Drive

Mt. Pleasant, MI 48858

ph 517 772 2537

November 22, 1991

This monitoring report is being sent to Mr. Bert Forsmark, Mr. David Anthony, Mr. Jerry Harburn and Mr. Junior Paul. Further distribution will be by them as desired. A copy of sheet #1, issue #4, dated November 12, 1991 (wd 222), the updated network model is enclosed. I shall be in touch shortly with Mr. Harburn to set the next monitoring if needed.

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.