IM-240 Michigan

Ralph J. Stephenson, P. E. Consulting Engineer August 15,1 994

Charles H. VanDeusen, P. E. Consultant 21160 East Farm Lane Northville, Michigan 48167

Dear Chuck:

Re: Disk for IM-240 project and bar charts of i2 la sht 1, dated August 2, 1994

Enclosed is a disk containing the issue #2 network model, dated August 2, 1994, for the IM-240 project. The network is in the <u>netwk fldr</u> and is the file named <u>i2la sht #1 i/m 240</u>. The file can be opened with any version of MacProject from MacProject II.1v2.1on. If those using the disk need any information, please have them call me.

Also enclosed are seven bar charts derived from the network models (critical path networks) for sites #1 through #7. These are stapled in sets of three, each being for the site as designated. I did tape one set together to show how they fit into a full network. However I left the others unassembled so you can duplicate them as needed.

The bar chart enclosed is not necessarily the best of the graphic bar charts that can be made. However, in the interest of time, I translated the critical path network material directly into the quickest format available. If you want the bar charts in a more refined graphic mode, please don't hesitate to call.

Sincerely yours,

Enclosure: disk 432 copy & 7 bar charts stapled

Ralph J. Stephenson, P. E.

#### IM-240 Michigan notes - disk 428

These notes are for the internal use of Systems Control Western Michigan IM-240 team.

- L Date of meeting: Friday, June 3, 1994
- II. Location of meeting: Dan Vos offices 6160 E. Fulton, Ada, Michigan
- III. Notes by Ralph J. Stephenson, P. E.
- IV. Those attending
  - A. \*Charles VanDeusen Systems Control, Inc.
  - B. \*Robert J. Hogeboom Systems Control, Inc.
  - C. \*Mark Scobell Dan Vos Construction Company
  - D. \*Fred Bull Systems Control, Inc.
  - E. Gordon DeYoung Dan Vos Construction Company
  - F. \*Dan Blundy Dan Vos Construction Company
  - G. Steve Bishop Moore and Brugginik
  - H. Jim Dykema Dykema Excavating
  - L \*Ralph J. Stephenson Consultant to Systems Control, Inc.
  - J. Pete Pociello MDOT did not atttend
  - K. Rich Tucker Systems Control, Inc.

#### V. Agenda

- A. Prepare network model for total project
- B. Set key dates
- C. Print out current networks

#### VI. Key dates

- A. 05/17/94 Systems Control gave written direction to proceed based on verbal notification of MDOT that SC was the successful proposer.
- B. 06/15/94 MDOT issue notice to proceed contract date
- C. 01/01/95 Incentive date for early start up of all 7 stations.
- D. 02/01/95 Total completion date for opening for operations at all 7 stations contract date
  - 1. Assume acceptance will take no more than 3 working days for inspection and another 12 working days for final approval.

#### VII. General notes

- A. Must determine at what point SC can begin installation of equipment relative to construction.
  - 1. 2 weeks before completion of construction.
- B. SC will complete negotiate contract with MDOT on June 3, 1994
  - Bob Miller will sign on June 3, 1994
- C. Must have contract ready for Commission meeting on June 15, 1994
  - 1. Must not extend past this date to next Commission meeting on July 21, 1994.
- D. SC will own, operate, service and maintain the facility for 7 years. MDOT will take over ownership of all land, buildings and equipment for all 7 sites.
  - 1. Options available at end of 7 years
    - a) Continue with SC
    - b) License to another operating group (rebid operation)
    - c) Cancel program
- E. MDOT retains approval rights to
  - 1. Final site selection

date printed: June 3, 1994 date last modified: June 2, 1994

- 2. Final site design
- Final building design has been approved verbally by MDOT.
- 4. Final inspection and acceptance procedure prior to public operation. How long will this take?
- F. Is a default condition on MDOT approvals of 15 calendar days (to be checked)
- G. MDOT must appoint a single point of contact this is currently Pete Pociello of MDOT
- H. Completion of construction does not include installation of equipment by Systems Control.

#### VIII. Physical characteristics of facilities

- A. Program components and tasks
  - 1. System design parts that impact construction are substantially complete for all except headquarters facility
    - a) #1 City of Whitehall
    - b) #2 Muskegon Township
    - c) #3 Spring Lake Township
    - d) #4 Holland Township
    - e) #5 Grand Rapids North
    - f) #6 City of Grandville
    - g) #7 City of Grand Rapids
    - h) Headquarters facility Plainfield Township
  - 2. Software development parts that impact construction are substantially complete for all 8
    - a) #1 City of Whitehall
    - b) #2 Muskegon Township
    - c) #3 Spring Lake Township
    - d) #4 Holland Township
    - e) #5 Grand Rapids North
    - f) #6 City of Grandville
    - g) #7 City of Grand Rapids
    - h) Headquarters facility Plainfield Township
  - 3. Site selection to be done by SC and consultants
    - a) #1 City of Whitehall complete
    - b) #2 Muskegon Township complete
    - c) #3 Spring Lake Township complete
    - d) #4 Holland Township complete
    - e) #5 Grand Rapids North To be determined.
    - f) #6 City of Grandville complete
    - g) #7 City of Grand Rapids complete
    - h) Headquarters facility Plainfield Township not determined as yet. Considering 5 areas at present.
  - 4. Facility design & permitting in progress. No permits in hand. Some soil borings may have been taken all by Dan Vos
    - a) #1 City of Whitehall
    - b) #2 Muskegon Township
    - c) #3 Spring Lake Township
    - d) #4 Holland Township
    - e) #5 Grand Rapids North

- f) #6 City of Grandville
- g) #7 City of Grand Rapids
- h) Headquarters facility Plainfield Township
- 5. Site acquisition no sites finally acquired
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township
  - d) #4 Holland Township
  - e) #5 Grand Rapids North
  - f) #6 City of Grandville
  - g) #7 City of Grand Rapids
  - h) Headquarters facility Plainfield Township
- 6. Construction no construction started
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township
  - d) #4 Holland Township
  - e) #5 Grand Rapids North
  - f) #6 City of Grandville
  - g) #7 City of Grand Rapids
  - h) Headquarters facility Plainfield Township
- SC equipment acquisition and installation standard equipment to be acquired and installed by SC.
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township
  - d) #4 Holland Township
  - e) #5 Grand Rapids North
  - f) #6 City of Grandville
  - g) #7 City of Grand Rapids
  - h) Headquarters facility Plainfield Township
- 8. Dan Vos equipment and installation must define these items as sepate from that SC provides.
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township
  - d) #4 Holland Township
  - e) #5 Grand Rapids North
  - f) #6 City of Grandville
  - g) #7 City of Grand Rapids
  - h) Headquarters facility Plainfield Township
- 9. Staff recruitment and training done totally by SC
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township

- d) #4 Holland Township
- e) #5 Grand Rapids North
- f) #6 City of Grandville
- g) #7 City of Grand Rapids
- h) Headquarters facility Plainfield Township
- 10. Acceptance testing done totally by SC in conjunction with MDOT.
  - a) #1 City of Whitehall
  - b) #2 Muskegon Township
  - c) #3 Spring Lake Township
  - d) #4 Holland Township
  - e) #5 Grand Rapids North
  - f) #6 City of Grandville
  - g) #7 City of Grand Rapids
  - h) Headquarters facility Plainfield Township
- IX. Abbreviations
- X. Glossary of terms
- XI. Laundry lists
- XII. Procurement information
- XIII. Transfer section

IM-240 Michigan notes - disk 428

Date of meeting: Friday, June 3, 1994

Location of meeting: Dan Vos offices - 6160 E. Fulton, Ada, Michigan

Notes by Ralph J. Stephenson, P. E.

Those attending

Pete Pociello - MDOT

Robert Brugginik - Moore and Brugginik

Gordon DeYoung - Dan Vos Construction Company

Mark Scobell - Dan Vos Construction Company

Jim Dykema - Dykema Excavating

Fred Bull - Systems Control, Inc.

Robert J. Hogeboom - Systems Control, Inc.

Charles Vandeusan - Systems Control, Inc.

Ralph J. Stephenson - Consultant to Systems Control, Inc.

Key dates

Physical characteristics of facilities

Program components and tasks

System design

Software development

Site selection

Facility design & permitting

Site acquisition

Construction

Equipment acquisition and installation

Staff recruitment and installation

Acceptance testing

I/M 240 MDOT Michigan Note file:

Ralph J. Stephenson, P. E. Consulting Engineer June 2, 1994

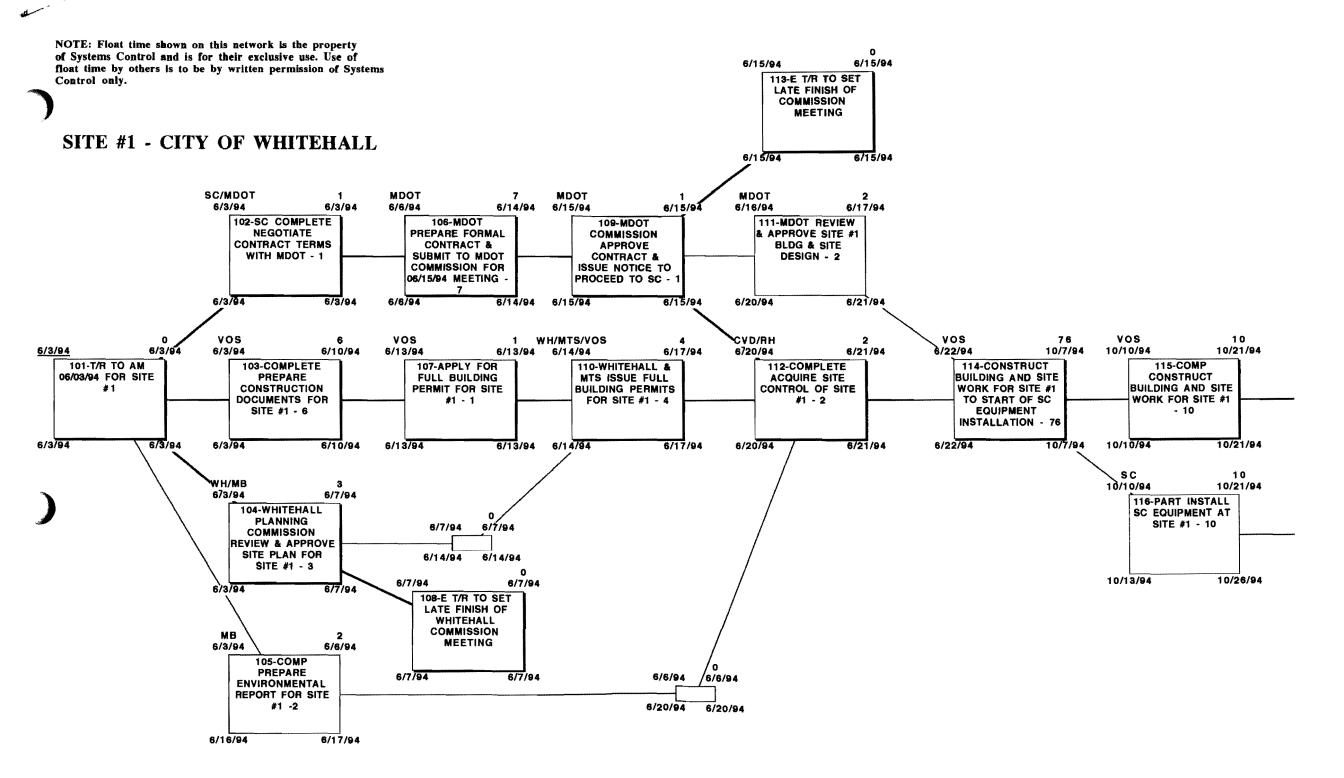
Abbreviations Glossary of terms Laundry lists Procurement information

XIV. Those involved

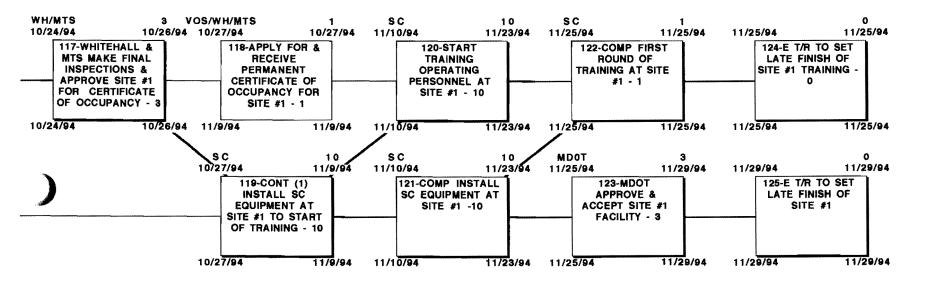
# Systems Control Michigan Facility DAN VOS CONSTRUCTION

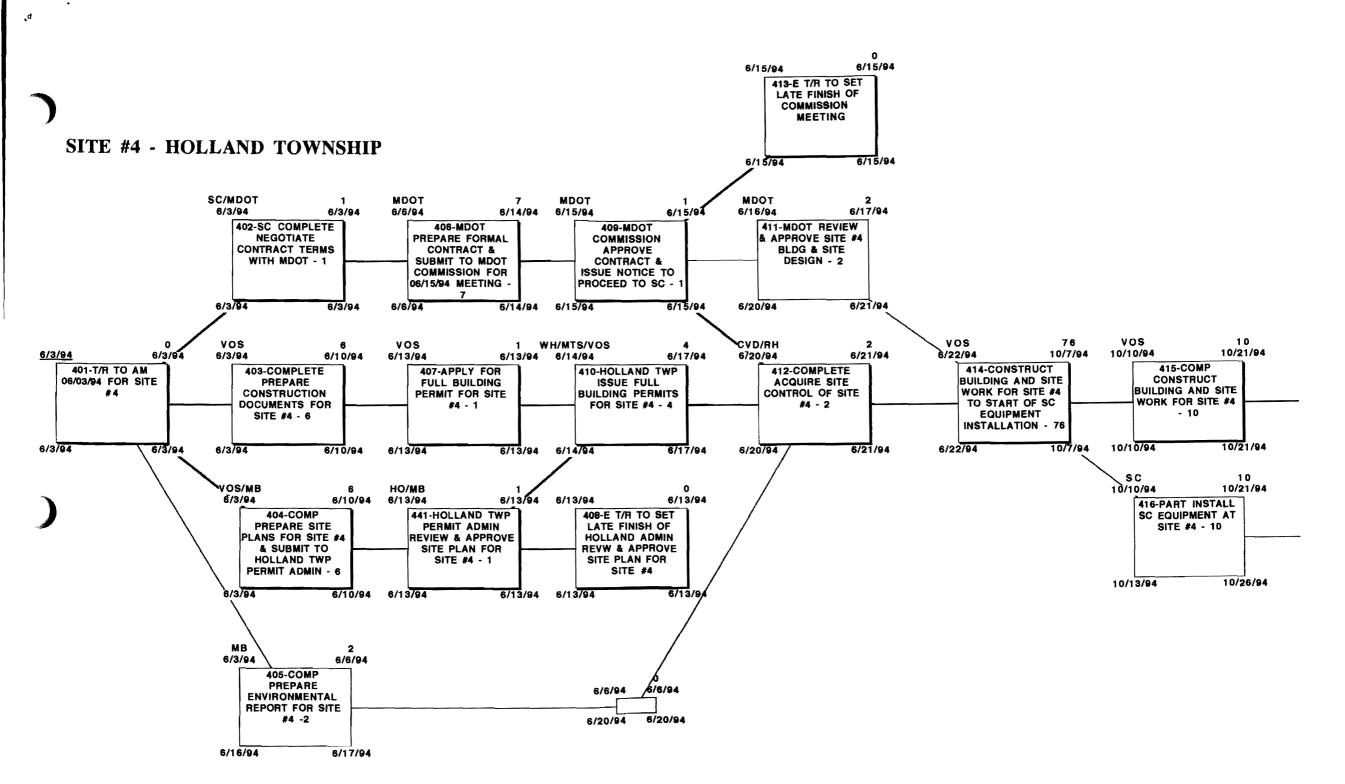
# **Typical Construction Schedule**

25-Mar-94	1	2	3	4	5	6	7	8	Q	10	11	12	13	14	15	16	17	18	19
Site demolition & preparation						Ť	•	_	<del></del>	1.0	-			•	1.0	<del>l ``</del>	•••	1.0	
Sewer and water piping	XXX	XXX								1		-				1	<b>-</b>	<b>—</b>	
Site concrete	-		XXX	X						<del> </del>	l				<del>                                     </del>	1		<b> </b>	
Paving preparation				XXX						<b>†</b>						<b> </b>			
Paving								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<del> </del>	xxx					<b>†</b>	<u> </u>	<b> </b>	
Landscaping														XXX	XXX	1			
Building excavation & founda	E		XXX	XX	Х					<u> </u>					1				<b>†</b>
Masonry					X	XXX	XXX	XXX										<b></b>	<b> </b>
Structural steel & roofing										XXX					<u> </u>	<b> </b>			
Doors and windows											Х	XXX							
Concrete flatwork-Interior				-							XXX								
Framing and drywall													XXX	XXX					
HVAC										XXX	XXX							XXX	XXX
Plumbing @ inspection bays								XXX					XXX	XXX					
Plumbing @ offices										XX							XXX		
Electrical @ inspection bays								XXX				XXX	XXX	XXX	XXX	XXX			
Electrical @ offices											XXX						XXX	XXX	XXX
Electrical @ site						XXX	XXX		XXX	XXX									
Gas and electric services											X								
Carpentry														XXX	XX				
Painting											XXX	XXX			XXX	XXX	XXX		
Ceiling and floor finishes																	X	XXX	XXX
MILESTONES																			
Weathertight building												X							
Bays ready for equip.																Х			
Certificate of occupancy																			X

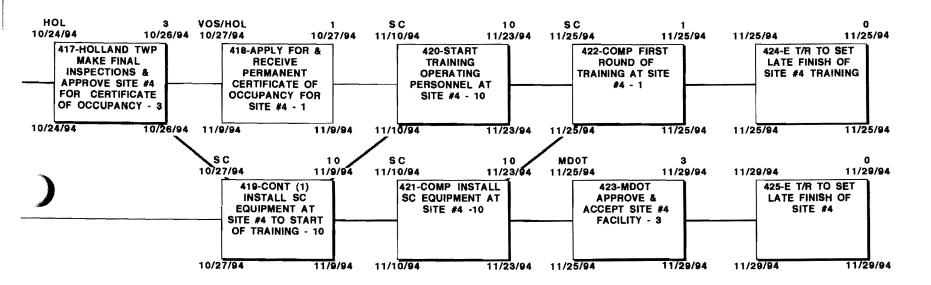


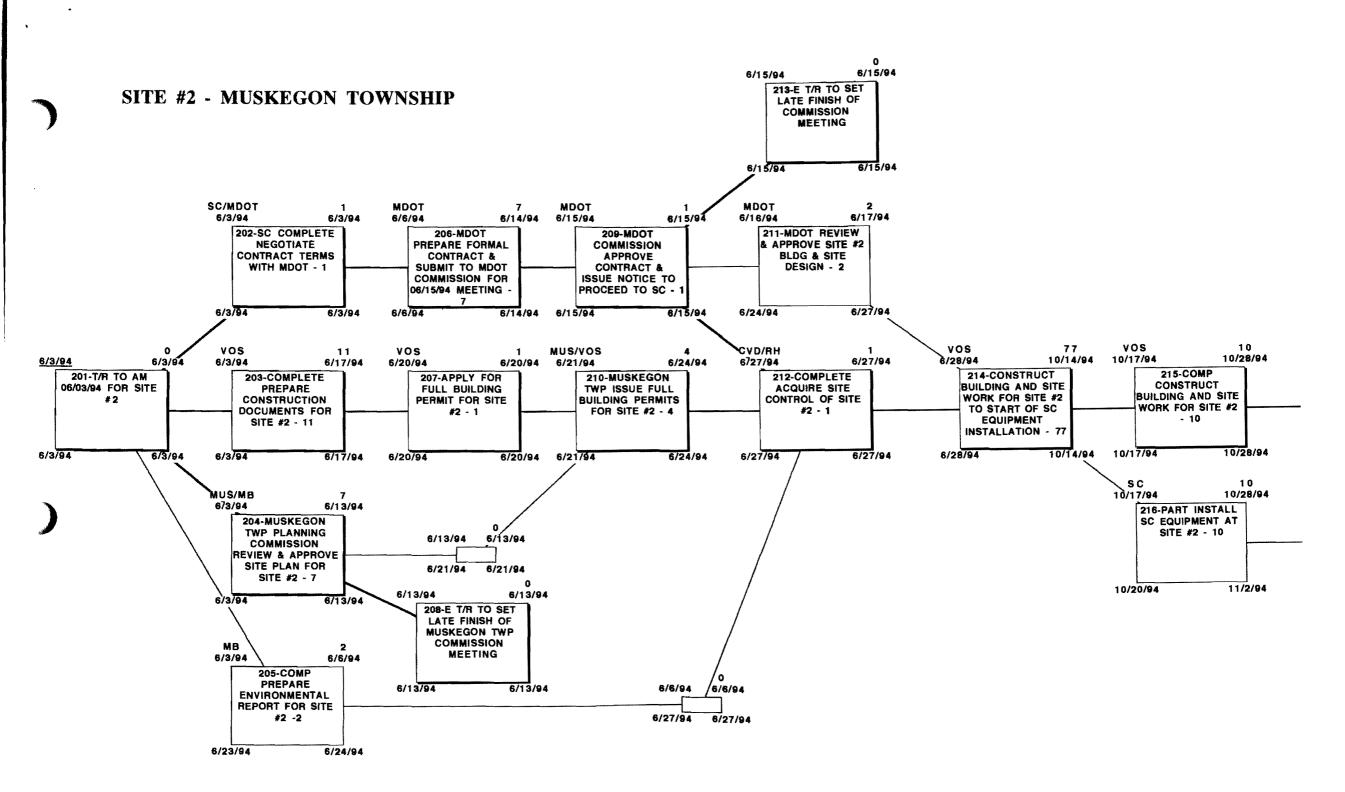
### SITE #1 - CITY OF WHITEHALL



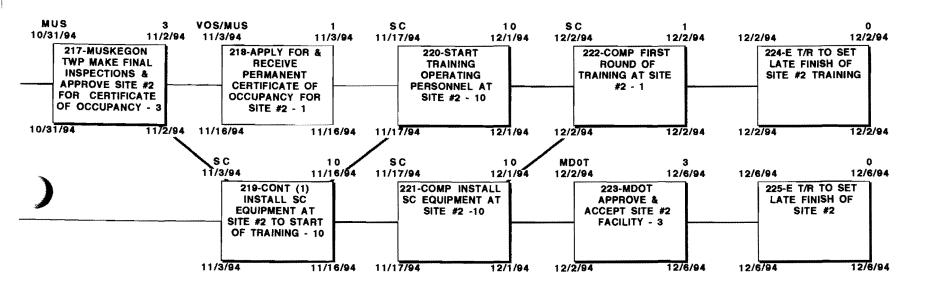


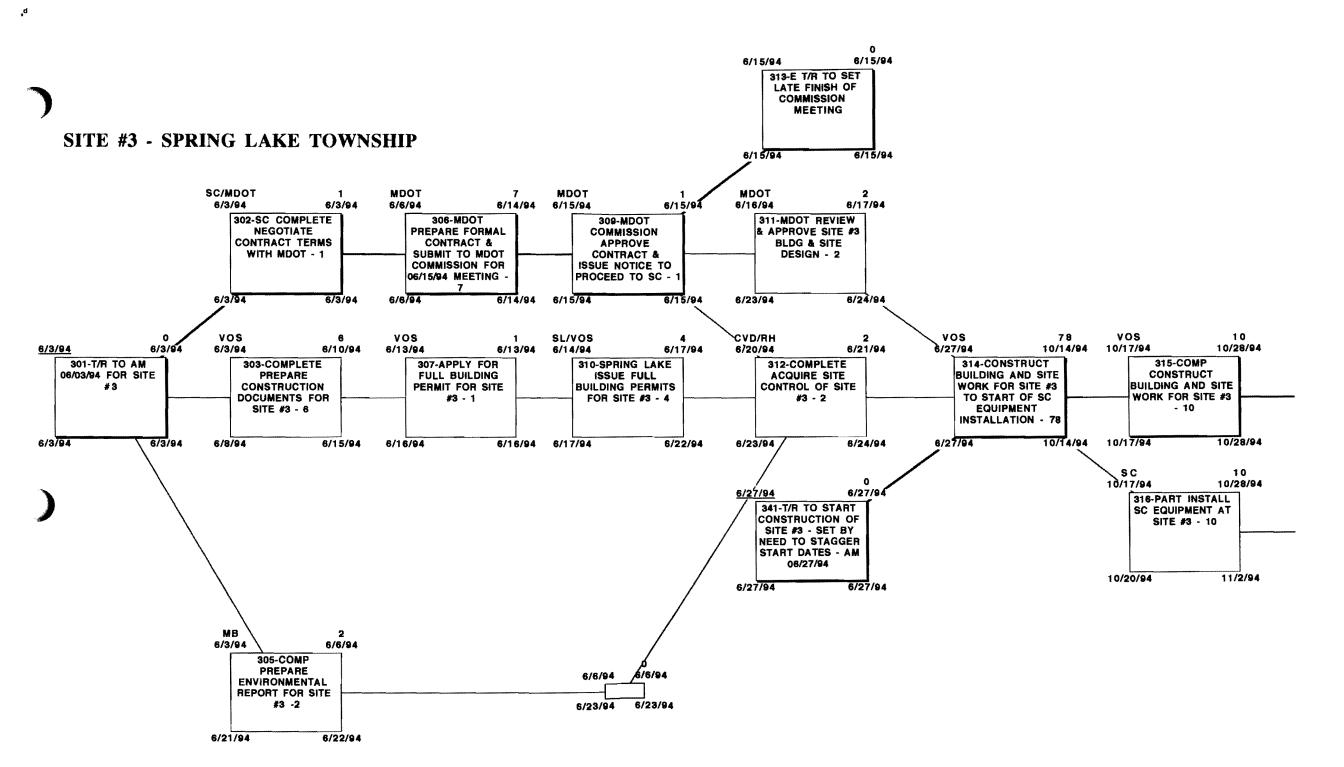
### SITE #4 - HOLLAND TOWNSHIP



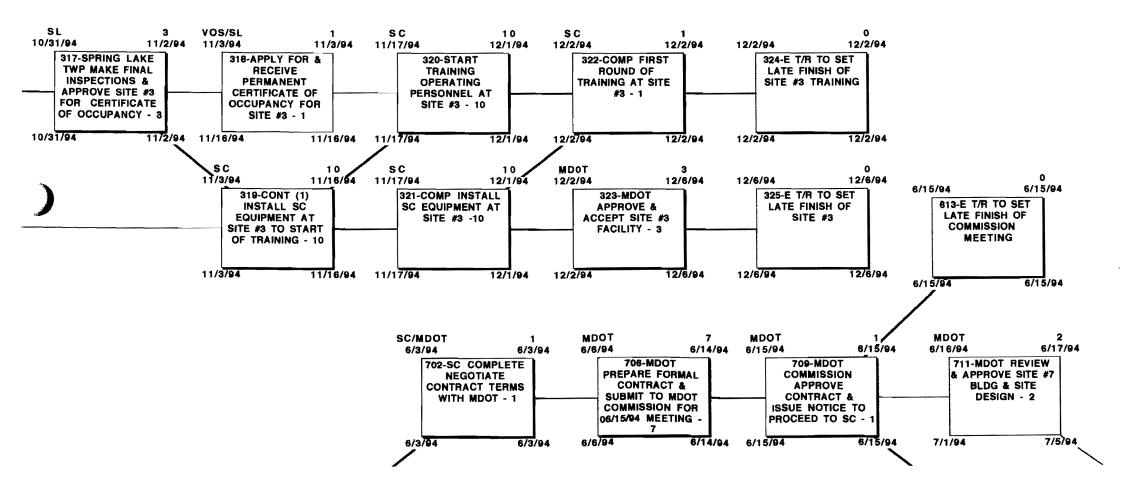


# SITE #2 - MUSKEGON TOWNSHIP

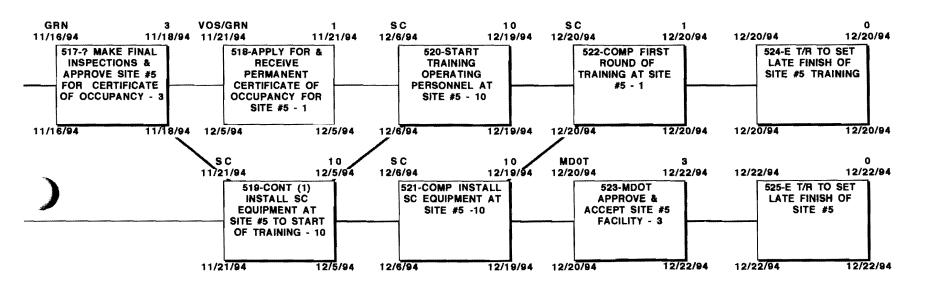


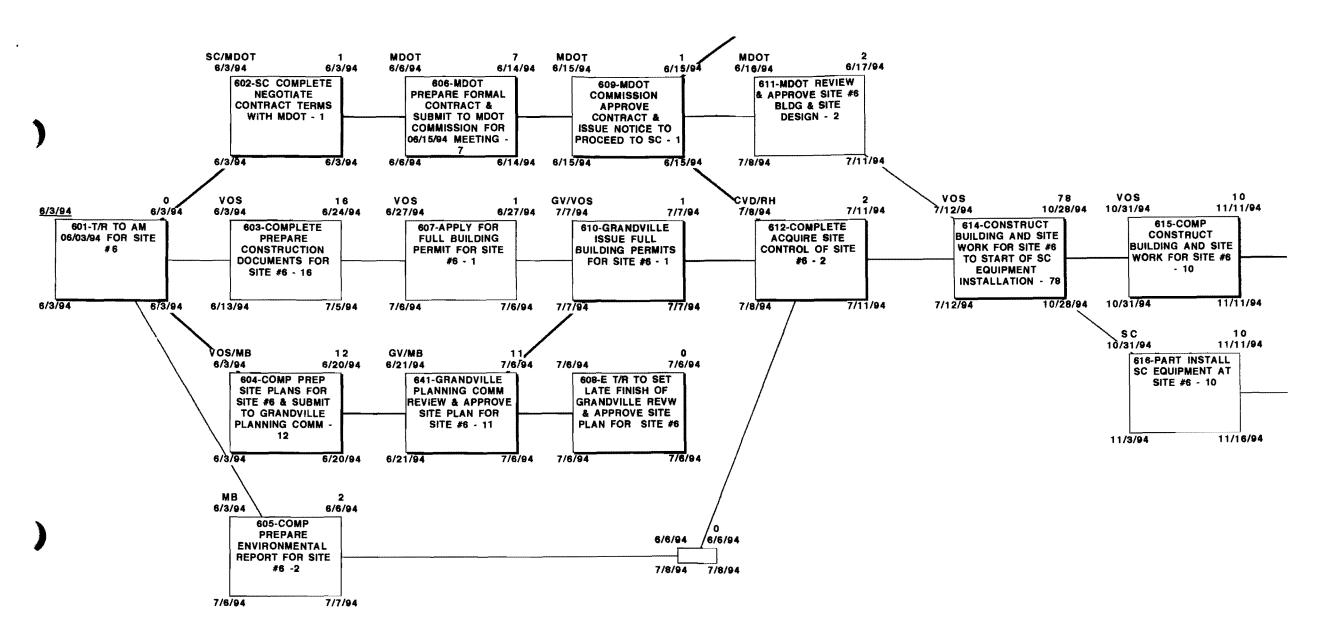


# SITE #3 - SPRING LAKE TOWNSHIP



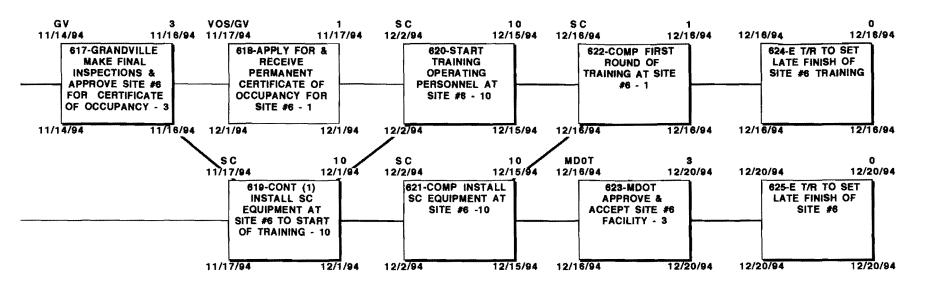
# SITE #5 - NORTH GRAND RAPIDS (MODEL TO BE COMPLETED)



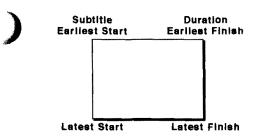


SITE #6 - GRANDVILLE

# SITE #6 - GRANDVILLE



Issue #01 - June 3, 1994 i1 sht #1 - disk 428



**TASK LEGEND** 

NETWORK PLANNING MODEL - I/M-240 VEHICLE EMISSIONS INSPECTION PROGRAM - Michigan Department of Transportation

Systems Control, Inc. Western Michigan Team

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

