

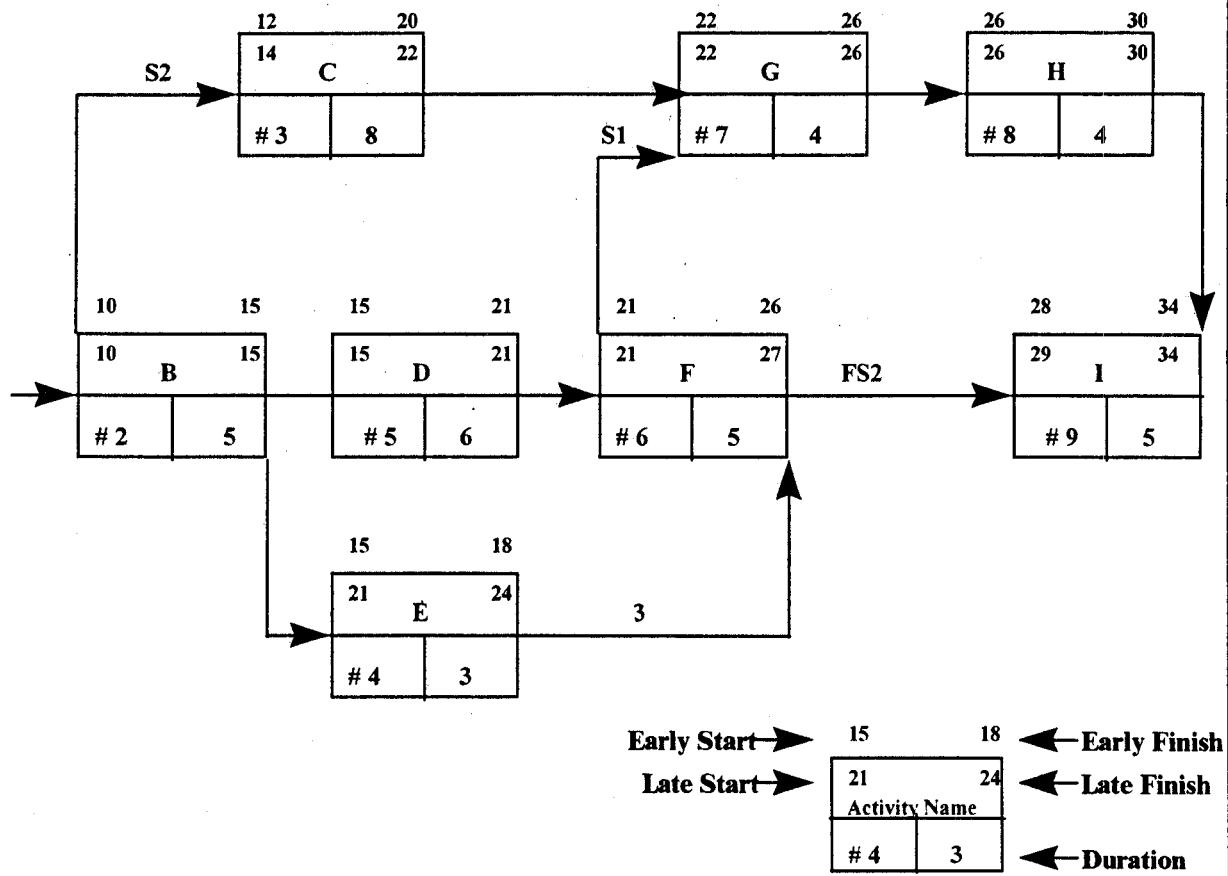


US Army Corps
of Engineers ®

EP 415-1-4

31 Oct 97

Network Analysis Systems Guide



CEMP-CE

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington D.C. 20314

EP 415-1-4

Pamphlet
No. 415-1-4

31 October 1997

Construction
NETWORK ANALYSIS SYSTEMS GUIDE

FOREWORD

This guide provides information for Corps of Engineers Construction and Engineering personnel in the application of Network Analysis Systems. It is intended to give a basic introduction to the two diagramming systems, precedence and arrow diagraming, and to instruct the reader in the various management uses of Network Analysis both when scheduling and when updating the schedule to show progress.

The information given in this pamphlet replaces the Network Analysis Systems Guide dated 31 August 1986. Basic policy and procedure concerning the use of Network Analysis are contained in the most current edition of ER 1-1-11.

Network Analysis scheduling systems encountered in the field will fall in either of the two diagramming techniques described herein. The Precedence system is by far the most common one in use currently. Managers must understand the system they are using. For a more detailed discussion of the systems capabilities and instruction in the use of Network Analysis, the PROSPECT course, 46NWA01A Project Scheduling (NAS) is offered several times annually at various locations.

FOR THE COMMANDER:



OTIS WILLIAMS
Colonel, Corps of Engineers
Chief of Staff

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington D.C. 20314

EP 415-1-4

CEMP-CE

Pamphlet
No. 415-1-4

31 October 1997

Construction
NETWORK ANALYSIS SYSTEMS GUIDE

INDEX

<u>Subject</u>	<u>Paragraph</u>	<u>Page</u>
CHAPTER 1 INTRODUCTION		
Purpose	1-1	1-1
Applicability	1-2	1-1
References	1-3	1-1
Distribution	1-4	1-1
General	1-5	1-1
CHAPTER 2 DEFINITION AND DEVELOPMENT		
Definition	2-1	2-1
Development	2-2	2-2
CHAPTER 3 PRECEDENCE DIAGRAMING SYSTEM		
Precedence Diagraming		3-1
CHAPTER 4 COMPUTER ANALYSIS		
Computer Analysis Computations		4-1
CHAPTER 5 MANAGEMENT		
Use of Management Data		5-1
CHAPTER 6 UPDATING		
Updating as Work Progresses		6-1
CHAPTER 7 ARROW DIAGRAMING SYSTEM		
Arrow Diagraming	7-1	7-1
Analysis	7-2	7-2
CHAPTER 8 SUMMARY		
Summary		8-1

CHAPTER 1

INTRODUCTION

1-1. Purpose. This pamphlet provides information for Corps of Engineers personnel in the application of Network Analysis Systems.

1-2. Applicability. This pamphlet is applicable to all FOA.

1-3. References. ER 1-1-11

1-4. Distrubution. Approved for public release; distribution is unlimited.

1-5 General. The wide scope of computer software presently available on the market is recognized. The intent of this pamphlet is not to attempt to describe all such systems but to give a basic introduction to the elements of diagramming and associated computer reports of the two most prevalent Network Analysis systems available at present. Examples of computer printouts are provided illustrating some information which can be extracted through the use of various computer data sorts. Also the recommended method of keeping the network schedule up to date and projecting the completion of work based on updates is addressed. This pamphlet illustrates the policies and specifications of ER 1-1-11. For a more detailed understanding of Network Analysis, the PROSPECT course, 46NWA01A, Project Scheduling (NAS), is recommended.

CHAPTER 2
DEFINITION AND DEVELOPMENT

2-1. Definition.

a. There are many names used for network analysis management systems. These systems differ somewhat in their diagramming techniques, notations, terminology, and computer programs, but operate fundamentally in the same manner producing the same basic information common to all of them. The term Network Analysis Systems (NAS) is used by the Corps of Engineers to cover all such systems.

b. The Corps of Engineers recognizes two NAS methods most commonly used by industry, "Precedence" diagramming where the activity is represented by a block and "Arrow diagraming" where the activity is represented by an arrow. These two scheduling systems employ significantly different diagramming techniques. The results of analyses from these systems produce similar report data, however, differences exist between them which must be recognized and understood. Precedence networks have become prevalent in the scheduling industry.

c. Network Analysis Systems can produce a variety of information. The procedures recommended herein include only those considered to be most applicable to work administered by the Corps of Engineers in the field of program planning, engineering design, construction, and operation and maintenance.

d. Where contracts require the use of Network Analysis Systems by the contractor, it is not intended that any specific Network Analysis System be designated as mandatory. Rather, it is intended that construction contractors be permitted to use procedures with which their management personnel are most familiar and can use most effectively, as long as those procedures provide the basic information required by the contract specifications. The procedures and techniques described herein are acceptable. Other programs exist which will provide the information specified in the contract. A Standard Data Exchange Format has been developed which allows transfer of basic data between participating programs.

e. NAS is not a new method of planning. It is a method graphically portraying planning, which demands much greater detail than was necessary under past procedures such as bar charts. It displays the logic or order and interdependence of the various activities in such a manner that they can be analyzed, so as to produce much more meaningful data. The time and cost associated with each task are used in mathematical computations which project completion and payment due as progress is made on the project.

2-2. Development.

a. Preparing the network diagram. Someone who thoroughly understands the project and knows how to accomplish the work or someone with access to those who have this information is the one best able to prepare the diagram, or at least have direct management of the preparation. If a consultant is used, his or her services should be limited to collecting and recording the basic information from appropriate managers and providing computer services for analysis and updating. Participation by responsible project managers or superintendent is vital. A common failing can occur if planning is left to an individual who is not directly involved in the project. If this is the case, management will not be committed to operate in accordance with the planning. Once the network plan is divorced from actual project accomplishment or becomes out of date with actual progress, it becomes useless.

b. The Logic Diagram. Network Analysis Systems function primarily for time analysis. Consequently, the project to be accomplished must be broken down into activities or tasks that require time, whether or not they require effort or costs. Normally, the degree of detail into which the project schedule is divided is determined by the activities to which reasonable time estimates can be applied. Of course, the degree of detail is also influenced by the accuracy desired and the use to be made of the system. Usually greater detail results in greater accuracy, since better time estimates can be made for smaller pieces of work. Many factors must be considered in determining the degree of detail to be shown. Since the project manager must furnish the estimates and use the data from the system, he or she should be involved in this decision concerning the level of detail. State-of-the-art computers handle large amounts of data very rapidly so that more detail can be handled easily in analysis. However, activities must be reviewed and updated by managers.

CHAPTER 3

PRECEDENCE DIAGRAMMING SYSTEM

Precedence Diagramming

a. Activities. The activities or work items in precedence are shown in a block (Figure 3-1). The description of the activity is usually shown in the top of the block as indicated with spaces provided for activity identification number and the duration also. Durations are estimated amounts of time that the activity is expected to take. Durations are usually expressed in work or calendar days but can be expressed in other units of time. Each activity is assigned a unique work item identification number which can be sequential but need not be.

b. Logic Diagraming. The considerations for precedence logic diagraming include three factors which should be considered:

- (1) What must be finished before this activity can be started?
- (2) What work can proceed concurrently with this activity?
- (3) What work cannot start until this activity is finished?

When these questions are satisfied, activities can be arranged in logical sequence. Precedence relationships are indicated by a series of arrows between activities. They define the relationship between the activities and they indicate interdependence but do not represent work. In this aspect precedence diagrams are relatively easy to construct. A sample precedence diagram is shown at Figure 3-2. B, C, and D cannot start until A is finished and B, C, and D are parallel or concurrent with respect to each other. However, in addition to the capability of relating the finish of one activity to the start of the next the start of one activity can be related to the start of another or the finish of one activity to the finish of another. A start to start relationship as depicted in Figure 3-5 in precedence indicates that the start of A must precede the start of B. Similarly, a finish to finish relationship indicates that the finish of A must precede the finish of B in Figure 3-6.

c. Lag Factors. The relationships mentioned above may be assigned time factors. While a finish to start relationship usually does not have a lag, it can (see Figure 3-4). Start to start and finish to finish relationships usually are assigned lag factors as indicated by the 3-day lags in Figures 3-5 and 3-6.

d. Manual Analysis. This is rarely done when working with precedence diagraming; however, it can be useful for illustration. Relationships, when assigned time factors, must be considered in the analysis forward and backward passes. Such lag factors often dictate early and late starts and finishes. When doing a precedence

GENERAL INFORMATION - PRECEDENT SYSTEM

A. Elements of the System.

1. Activity/Work Item: Includes description, duration, and work (Number Identifier) enclosed in a node rather than shown on an arrow generally indicated similar to:

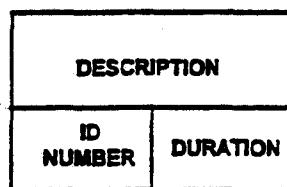


Figure 3-1

2. Logic Information: Indicated by position of nodes in relation to each other, arrows are used to identify dependencies between nodes/activities.

B. Example of a Diagram: (A, B, C, D, E, F, and G are activities.)

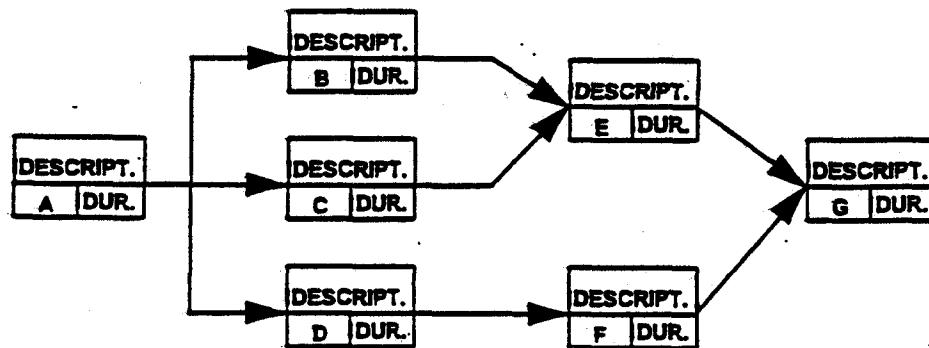


Figure 3-2

C. Example of Dependencies:

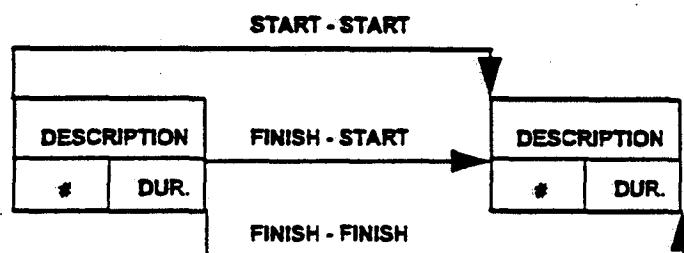
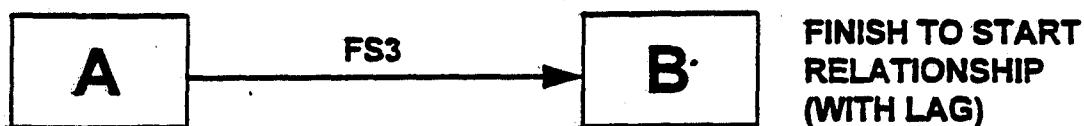


Figure 3-3

PRECEDENT ACTIVITY DEPENDENCY RELATIONSHIPS WITH "LAG" FACTORS

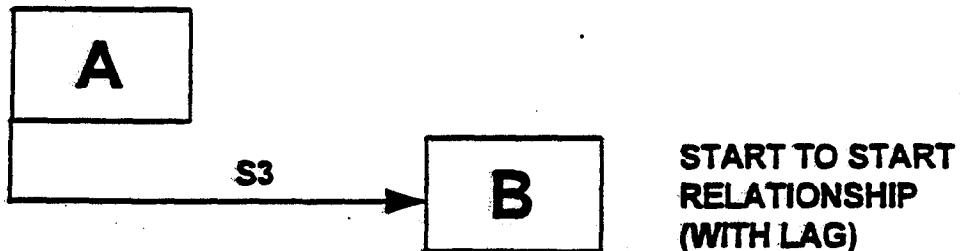
A.



EXAMPLE: CONCRETE PLACEMENT **A** MUST BE FINISHED 3 DAYS BEFORE FORMS CAN BE STRIPPED **B**

Figure 3-4

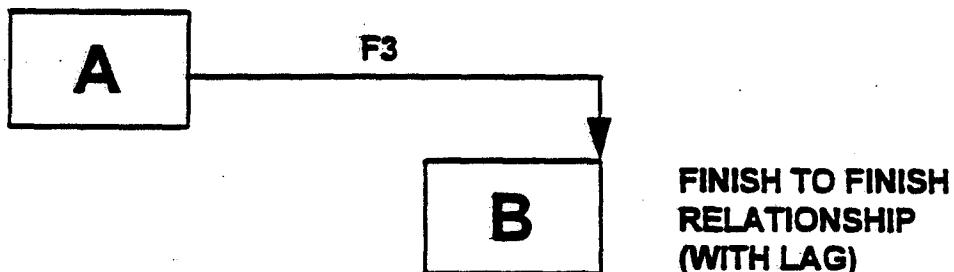
B.



EXAMPLE: FORMS MAY BE STRIPPED **B** 3 DAYS AFTER THE START OF CONCRETE PLACEMENT **A**

Figure 3-5

C.



EXAMPLE: FORM STRIPPING **B** CANNOT BE FINISHED UNTIL 3 DAYS AFTER THE FINISH OF CONCRETE PLACEMENT **A**

Figure 3-6

forward pass, if a selection is required between the results of two calculations, the larger answer is selected. Similarly, in a precedence backward pass a selection is resolved by selecting the least of the values indicated. Conventionally, the Early Start (ES), Early Finish (EF), Late Start (LS), and Late Finish (LF) are shown as indicated on the sample activity in Figure 3-7. One should note that the lag factors between activities can influence the starts and finishes to the extent that the (ES) and (EF) for an activity may not differ by the activity duration and, likewise, the (LS) and (LF) may not.

e. The Critical Path. In a precedence network the critical path consists of a chain of activities controlling the length of the project. In addition, if start to start or finish to finish relationships are included, the critical path may include some of these lag times. An activity or the critical path will display the characteristics of equal early and late start and finish dates and the difference between the start and finish equal to the duration. If, however, a start to start or a finish to finish relationship is critical, the start of an activity may be critical but not the finish. Likewise, the finish may be critical but not the start. Note Activities 6 and 9 on Figure 3-7 evince these conditions.

f. Activity Data. The most common data elements relevant to activities are as follow:

(1) Early Start (ES) is the earliest date an activity can be started. It is the earliest time the activity can start due to the latest early finish time of a predecessor activity or from a start lag from a predecessor activity. The ES for activity 5 is 15 (Figure 3-7).

(2) Early Finish (EF) is the earliest date an activity can be completed and is found by adding the duration (D) to the ES or from a finish lag from a predecessor activity. For Activity 6, EF is 26 (Figure 3-7) .

(3) Late Finish (LF) is the latest date an activity can be finished and permit the project to be completed on time.. It is derived by subtracting from the late start of a successor activity or by subtracting through a finish lag from a successor activity. For activity 4, the LF is 24 (Figure 3-7) .

(4) Late Start (LS) is the latest date an activity can start without delaying final completion of the project. For any activity it is found by subtracting the duration time from the LF or by subtracting through a start lag from a successor activity. In Figure 3-7, the late start for activity 7 is LF minus the duration, or $26-4=22$. The late start for activity 6 is the late start of activity 7 minus the one-day start lag, or $22-S1=21$.

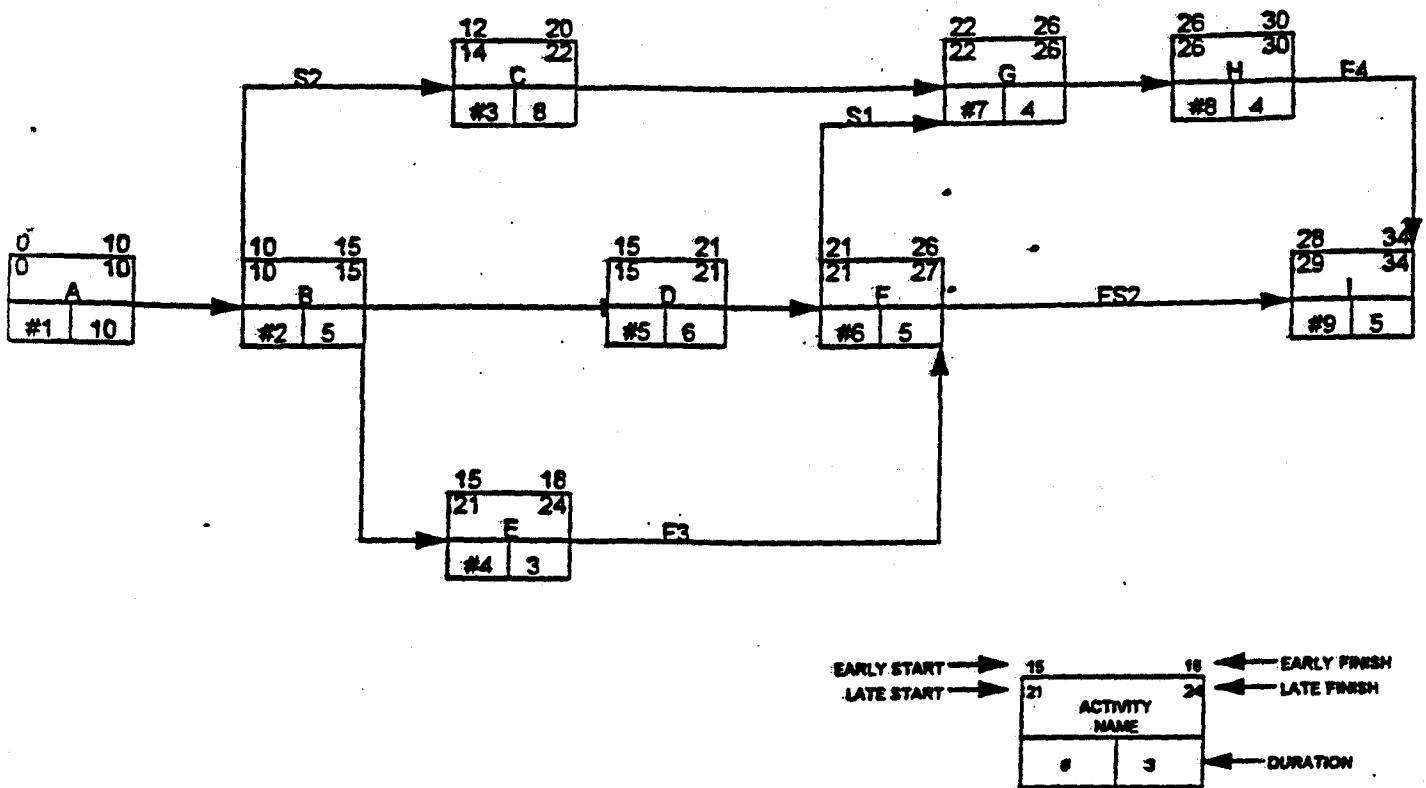


Figure 3-7

(5) Total Float (TF) is the amount of time available for scheduling an activity. It is the time that start of an activity can be delayed beyond the ES without affecting the final completion date of the project. It is the difference between the early start and late start (LS-ES) or early finish and late finish (LF-EF) of any given activity. Notice that any of these calculations yields an answer of 0 for a critical activity. Total float must be calculated in one of the above ways since it does not appear directly on the diagram. In the Precedence diagramming system, if start to start or finish to finish lags are used, it is possible for the total float on the start and finish of an activity to differ. In such an instance the start float may be more critical (smaller) than the finish float or vice versa. Total float is the most significant float calculation. Free float (FF) is a feature which signifies only float available without affecting the next activity early start. The only concept that has significant value in contract management is total float. The critical path (TF=0) for Figure 3-7 is A (#1), B (#2), D (#5), S1 lag, G (#7), H (#8), F4 lag.

g. Activity Data. If start to start or finish to finish relationships are included, they may dictate the Early Start (ES), Late Start (LS), Early Finish (EF), or Late Finish (LF) dates for an activity in such a way that (ES) + Duration is not the (EF) and LF - Duration is not the (LS). This occurs when that the start to start lags and the finish to finish lags dictate a period between start and finish longer than the activity duration.

CHAPTER 4

COMPUTER ANALYSIS

Computer Analysis Computations. When the logic diagram has been developed with descriptions, activity numbers, and estimated duration times for the activities, all other analysis computations can be made by computer with the results listed in tabular format on printouts which are easy to read and use. In the Precedence diagramming system, the input information needed by the computer includes the following for each activity; activity identification number, duration time, activity description, the predecessor and successor activities, and any start to start or finish to finish relationships and lag times. Other information such as activity cost, contractor, subcontractor or Government responsibility can also be entered if desired. The computer should also be told what output information is desired in each report. Information can be sorted by any data desired. Some useful sorts are as follows:

- a. Work Activity Number Sort. A work item sort for precedence diagrams provides a convenient listing to locate any one activity quickly. It is the "dictionary" sort of activities in order of work item number for the precedence system.
- b. Predecessor/Successor Report. In the precedence system, a report of what activities precede and what activities follow any activity is available. These reports are necessary for complete analysis of the precedence logic.
- c. Late Start Sort. A listing of activities by late start dates arranges the activities in chronological order of start dates which must be met to maintain schedule. All activities with must start dates for the next report period can be quickly identified.
- d. Early Start Sort. A tabulation of activities by early start dates will group those activities which can be started during the next report period. This provides the manager with the work which can start and the dates on which he or she may begin it.
- e. Late Finish Sort. A listing of activities in chronological order of late finish dates provides a means to quickly locate all activities which must be finished during the next report period, and the dates which must be met to maintain or to regain the schedule.
- f. Early Finish Sort. A listing of activities in chronological order of early finish dates provides a means to quickly locate all activities which can be finished during the next report period.

g. Responsibility Sort. If contractor, subcontractor, Government, etc. responsibility has been entered as an activity resource, a report can be extracted in groupings of responsibility as coded. These reports are useful to distribute assigned schedule dates to various responsible parties such as subcontractors.

h. Total Float Sort. A listing of activities in order of total float identifies the critical path and other float paths in ascending order of float. As the float value of a path increases its criticality decreases. If the report secondary sort is by early start the paths will appear in order. This listing is very useful for a number of reasons. The date on the early finish of the final critical activity projects the completion of the project. The critical activities controlling this completion are displayed together in order. The next groups of activities which are nearly as critical are displayed together grouped in ascending order of float. Most computer software systems allow the fixation of the late finish of the final critical activity on any date such as the current contract completion date. If the projected early project finish slips beyond this date, a negative float calculation will result on the critical path and perhaps on other nearly critical paths. This provides a display of where, by how much, and on which activities the project must be accelerated to regain schedule. Similarly, if the projected early finish of the last critical activity falls earlier than the fixed contract completion date, the most critical path will display a positive float value.

i. Reports. If activity costs have been assigned to each activity that represents a cost item, cost reports can be generated projecting possible payment based on early or late sort arrangements. These reports allow an early and late fund requirement prediction.

CHAPTER 5

MANAGEMENT

Use of Management Data.

a. Information. Network Analysis provides information which the Gantt (bar) chart does not provide, such as:

(1) Which specific activities control the total time required to accomplish the project, the critical path.

(2) Time parameters within which each activity can and must be done to meet the completion date for a project. These are defined by the early start and late finish dates for each activity.

(3) Degree of criticality and latitude available for scheduling each activity (float or slack).

(4) Identification of all activities which must be started or finished during any selected time period in order to meet a required completion date for the project.

(5) Identification of all activities which could be started during any selected time period.

(6) Impact of delays and variations from original activity time estimates and/or logic on other activities and the overall project.

(7) Identification of the causes for past delays and which activities need attention in the future to make up the lost time.

b. Use of Network Analysis Reports. The manager must be able to obtain appropriate management information rapidly if this information is to be useful. It is easily obtained from computer print-outs arranged in appropriate sorts. Figure 5-1 is a copy of a listing of activities in the activity number order with budget amounts for appropriate activities. Figure 5-2 is a reprint of the same data computer sorted by early finish and abbreviated to indicate only those activities that can finish in the months of July and August 1994. Figure 5-3 is another reprint of the same data reprint computer sorted by early start and abbreviated to show only those activities which can start in July and August 1994. To reduce the volume of data printed, limit the early and late start and finish sorts to the upcoming month or two. Figure 5-4 is a list of the activities which are the Government's responsibility. Figure 5-5 and 5-6 are computer sorts ordered by late finish and late start in the months of July and August 1994. Figure 5-7 is a listing of all activities that involve responsibility of the

EP 415-1-4 ·
31 Oct 97

mechanical/ electrical subcontractor with budget figures included. Note that the late start and finish columns have been erased in this report. Figure 5-8 is another abbreviated reprint computer sorted by Total Float less than 14 days. Note the critical path consists of activities with 0 total float. These activities are in order due to a secondary sort by the early start date. The critical path is followed in order by a path sharing 1 day total float then 5, 7, 12, and 13 days. Figure 5-9 is a listing of the activities listed by activity number including all predecessor and successor activities for each activity. These are noted by PR and SU, respectively. A predecessor/successor report is necessary in order to review and understand the logic of the project diagram. While the diagram can be computer plotted, the activity to activity relationships are often difficult if not impossible to view accurately. Figure 5-10 is a sample of the diagram printed from this data. Note that it is impossible to follow the logic from such a reduced diagram or even one on a larger scale. This series of reports is provided to illustrate the various reports that are available to manage a project. The Government manager should select only those reports which he or she deems necessary or design others to his or her liking.

Yg. Len Construction Company

PRIMAVERA PROJECT PLANN.

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 6MAR95 RUN NO. 54
13:09

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT WITH ACTIVITY BUDGETS

DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNSD	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	.00	.00	1JUL94	1JUL94	1JUL94	1JUL94	0
2	7	7	0	MOBILIZE & LAYOUT	.00	.00	2JUL94	8JUL94	27JUL94	2AUG94	25
3	30	30	0	SUBMIT & APPROVE MECH/ELEC R.I.	10000.00	.00	2JUL94	31JUL94	3JUL94	1AUG94	1
4	20	20	0	SUBMIT SHOP DRAWINGS PAN FORMS	.00	.00	2JUL94	21JUL94	17AUG94	5SEP94	46
5	20	20	0	SUBMIT SHOP DRAWINGS METAL DOORS	.00	.00	2JUL94	21JUL94	22AUG94	10SEP94	51
6	30	30	0	SUBMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	.00	.00	2JUL94	31JUL94	12AUG94	10SEP94	41
7	30	30	0	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	.00	.00	2JUL94	31JUL94	12SEP94	11OCT94	72
8	45	45	0	SUBMIT SHOP DRUGS. ALUM. ENTR	.00	.00	2JUL94	15AUG94	7OCT94	20NOV94	97
9	45	45	0	SUBMIT LATH & PLASTER	.00	.00	2JUL94	15AUG94	25DEC94	7FEB95	176
10	45	45	0	SUBMIT CERAMIC TILE	.00	.00	2JUL94	15AUG94	13OEC94	26JAN95	164
11	45	45	0	SUBMIT TOILET PARTITIONS & ACC	.00	.00	2JUL94	15AUG94	12FEB95	28MAR95	225
12	30	30	0	SUBMIT PLUMBING FIXTURES & MEC	.00	.00	2JUL94	31JUL94	20OCT94	18NOV94	110
13	30	30	0	SUBMIT ELECTRIC FIXTURES & EQUIP.	.00	.00	2JUL94	31JUL94	17OEC94	15JAN95	168
14	45	45	0	SUBMIT & APPROVE SHOP DRUG. MISC. METAL	.00	.00	2JUL94	15AUG94	17OCT94	30NOV94	107
15	35	35	0	SUBMIT & APPROVE SHOP DRUG. REINF. STEEL	.00	.00	2JUL94	31JUL94	2JUL94	5AUG94	0
16	45	45	0	SUBMIT & APPROVE ROOF DECK SHO	.00	.00	2JUL94	15AUG94	26OCT94	9DEC94	116
17	30	30	0	SUBMIT ROOF & SHEET MET SHOP DRAW . WINGS	.00	.00	2JUL94	31JUL94	8OCT94	6NOV94	98
18	30	30	0	SUBMIT X-RAY PROTECTION	.00	.00	2JUL94	31JUL94	23OCT94	21NOV94	113
19	45	45	0	SUBMIT & APPROVE DOOR CANOPIES	.00	.00	2JUL94	15AUG94	26MAR95	9MAY95	267
20	30	30	0	SUBMIT PAINT SAMPLES	.00	.00	2JUL94	31JUL94	19JAN95	17FEB95	201
21	30	30	0	SUBMIT VINYL WALL COVERING	.00	.00	2JUL94	31JUL94	22MAR95	20APR95	263
22	30	30	0	SUBMIT SHOP DRAWINGS MILLWORK	.00	.00	2JUL94	31JUL94	25DEC94	23JAN95	176
23	30	30	0	SUBMIT RESILIENT FLOOR SAMPLES	.00	.00	2JUL94	31JUL94	23FEB95	24MAR95	236
24	45	45	0	SUBMIT SHOP DRAWINGS CASEWORK	.00	.00	2JUL94	15AUG94	27NOV94	10JAN95	168

Figure 5-1

REPORT DATE 6MAR95 RUN NO. 54
13:09

SCHEDULE REPORT WITH ACTIVITY BUDGETS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

DATA DATE 1JUL94 PAGE NO. 2

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNS	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
25	45	45	0	SUBMIT HOSPITAL & MISC. EQUIPMENT	.00	.00	2JUL94	15AUG94	17OCT94	30NOV94	107
26	30	30	0	SUBMIT MISC. BUILDING EQUIPMENT	.00	.00	2JUL94	31JUL94	2MAY95	31MAY95	243
27	15	15	0	CONCRETE DESIGN MIX	.00	.00	2JUL94	16JUL94	6AUG94	20AUG94	35
28	30	30	0	PRE-QUALIFY WELDERS	.00	.00	2JUL94	31JUL94	30NOV94	29DEC94	151
29	45	45	0	SUBMIT & APPROVE SHP DRHG OS E	.00	.00	2JUL94	15AUG94	3NOV94	17DEC94	124
30	14	14	0	ROUGH GRADE & EXCAVATE BUILDIN	20000.00	.00	9JUL94	22JUL94	3AUG94	16AUG94	25
31	32	32	0	DEMOLITION & SITE GRADING	50000.00	.00	9JUL94	9AUG94	31DEC94	31JAN95	175
32	45	45	0	SUBMIT & APPROVE MASONRY MATER	.00	.00	2JUL94	15AUG94	25OCT94	8DEC94	115
33	30	30	0	SUBMIT SHOP DRAWINGS METAL WINDOWS	.00	.00	2JUL94	31JUL94	10SEP94	9OCT94	70
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	65000.00	.00	1AUG94	15AUG94	2AUG94	16AUG94	1
35	15	15	0	GOVERNMENT APPROVE PAN FORMS	.00	.00	22JUL94	5AUG94	6SEP94	20SEP94	46
36	15	15	0	GOVERNMENT APPROVE METAL DOOR	.00	.00	22JUL94	5AUG94	11SEP94	23SEP94	51
37	20	20	0	GOVERNMENT APPROVE STRUCT. STE	.00	.00	1AUG94	20AUG94	11SEP94	30SEP94	41
38	45	45	0	DELIVER MASONRY MATERIALS	47500.00	.00	16AUG94	29SEP94	9DEC94	22JAN95	115
39	20	20	0	GOVERNMENT APPROVE METAL WINDO	.00	.00	1AUG94	20AUG94	10OCT94	29OCT94	70
40	30	30	0	GOVERNMENT APPROVE BUILDER'S H	.00	.00	1AUG94	30AUG94	12OCT94	10NOV94	72
41	20	20	0	GOVERNMENT APP. ALUM. ENTRANCE	.00	.00	16AUG94	4SEP94	21NOV94	10DEC94	97
42	15	15	0	GOVERNMENT APPROVE LATH & PLAS	.00	.00	16AUG94	30AUG94	8FEB95	22FEB95	176
43	30	30	0	GOVERNMENT APPROVE CERAMIC TIL	.00	.00	16AUG94	14SEP94	27JAN95	25FEB95	164
44	20	20	0	GOVERNMENT APPROVE TOILET PART	.00	.00	16AUG94	4SEP94	29MAR95	17APR95	225
45	30	30	0	GOVT. APPROVE PLUMB. FIXTURES	.00	.00	1AUG94	30AUG94	19NOV94	18DEC94	110
46	30	30	0	GOVERNMENT APPROVE ELEC. FIXTU	.00	.00	1AUG94	30AUG94	16JAN95	14FEB95	168
47	45	45	0	FABRICATE & DELIVER MISC. METALS	.00	.00	16AUG94	29SEP94	1DEC94	14JAN95	107
48	15	15	0	DELIVER REINFORCING STEEL	17500.00	.00	6AUG94	20AUG94	6AUG94	20AUG94	0
					45000.00						

31 Oct 97

Figure 5-1 Cont.

Moygreen Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 6MAR95 RUN NO. 54

13:09

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT WITH ACTIVITY BUDGETS

DATA DATE 1JUL94 PAGE NO. 3

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNSD	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
49	30	30	0	DELIVER ROOF DECK MATERIALS	.00	.00	16AUG94	14SEP94	10DEC94	8JAN95	116
50	15	15	0	GOVERNMENT APPROVE ROOF & SHEE	.00	.00	1AUG94	15AUG94	7NOV94	21NOV94	98
51	20	20	0	GOVERNMENT APPROVE X-RAY PROTE	.00	.00	1AUG94	20AUG94	22NOV94	11DEC94	113
52	75	75	0	DELIVER DOOR CANOPIES & SIGNS	10000.00	.00	16AUG94	29OCT94	10MAY95	23JUL95	267
53	30	30	0	GOVERNMENT TEST & APPROVE PAINT	.00	.00	1AUG94	30AUG94	18FEB95	19MAR95	201
54	30	30	0	GOVERNMENT APPROVE COLOR SAMPL	.00	.00	1AUG94	30AUG94	21APR95	20MAY95	263
55	20	20	0	GOVERNMENT APPROVE MILLWORK	.00	.00	1AUG94	20AUG94	24JAN95	12FEB95	176
56	30	30	0	GOVERNMENT APPROVE COLOR SEL	.00	.00	1AUG94	30AUG94	25MAY95	23APR95	236
57	30	30	0	GOVERNMENT APPROVE CASEWORK	.00	.00	16AUG94	14SEP94	11JAN95	9FEB95	148
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	.00	.00	16AUG94	14SEP94	10DEC94	30DEC94	107
59	20	20	0	GOVERNMENT APPROVE MISC. BUILD	.00	.00	1AUG94	20AUG94	1APR95	20APR95	243
62	10	10	0	ROUGH IN UNDER BASEMENT	10000.00	.00	16AUG94	25AUG94	17AUG94	26AUG94	-1
63	45	45	0	DELIVER PAN FORMS	.00	.00	6AUG94	19SEP94	21SEP94	4NOV94	46
64	90	90	0	FABRICATE & DELIVER METAL DOORS	10000.00	.00	6AUG94	3NOV94	26SEP94	24DEC94	51
65	45	45	0	FABRICATE & DELIVER STEEL COLUMNS	7500.00	.00	21AUG94	4OCT94	10NOV94	24DEC94	81
66	90	90	0	FABRICATE & DELIVER STRUCT. STEEL	95000.00	.00	21AUG94	18NOV94	1OCT94	29DEC94	41
67	2	2	0	SAMPLE MASONRY PANEL	.00	.00	30SEP94	1OCT94	23JAN95	24JAN95	115
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	10000.00	.00	21AUG94	18NOV94	30OCT94	27JAN95	70
69	120	120	0	DELIVER BUILDER'S HARDWARE	45000.00	.00	31AUG94	28DEC94	11NOV94	10MAR95	72
70	90	90	0	FABRICATE & DELIVER ALUM. ENTRANCE	22500.00	.00	5SEP94	3DEC94	11DEC94	10MAR95	97
71	30	30	0	DELIVER LATH & PLASTER MATERIALS	.00	.00	31AUG94	29SEP94	23FEB95	24MAR95	176
72	45	45	0	DELIVER CERAMIC TILE MATERIAL	45000.00	.00	15SEP94	29OCT94	26FEB95	11APR95	164
73	90	90	0	DELIVER TOILET PARTITIONS & ACCESSORIES	20000.00	.00	5SEP94	3DEC94	18APR95	16JUL95	225
74	150	150	0	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	215000.00	.00	31AUG94	27JAN95	19DEC94	17MAY95	110

REPORT DATE 6MAR95 RUN NO. 56
13:09

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT WITH ACTIVITY BUDGETS

DATA DATE 1JUL94 PAGE NO. 4

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNED	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
75	120	120	0	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	115000.00	.00	31AUG94	28DEC94	15FEB95	14JUN95	168
76	60	60	0	FABRICATE & DELIVER SHEETMETAL\ROOF	.00	.00	16AUG94	14OCT94	22NOV94	20JAN95	98
77	75	75	0	DELIVER PROTECTION MATERIALS	17500.00	.00	21AUG94	3NOV94	12DEC94	24FEB95	113
78	45	45	0	DELIVER PAINT MATERIALS	.00	.00	31AUG94	14OCT94	20MAR95	3MAY95	201
79	60	60	0	DELIVER VINYL WALL COVERING	7500.00	.00	31AUG94	29OCT94	21MAY95	19JUL95	263
80	120	120	0	FABRICATE & DELIVER MILLWORK	30000.00	.00	21AUG94	18DEC94	13FEB95	12JUN95	176
81	45	45	0	DELIVER RESILIENT FLOOR MATERIALS	17500.00	.00	31AUG94	14OCT94	24APR95	7JUN95	236
82	150	150	0	DELIVER CASEWORK	80000.00	.00	19SEP94	11FEB95	10FEB95	9JUL95	148
83	180	180	0	DELIVER HOSPITAL & MISCELLANEOUS EQUIPMENT	215000.00	.00	15SEP94	13MAR95	31DEC94	28JUN95	107
84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	30000.00	.00	21AUG94	18NOV94	21APR95	19JUL95	243
85	16	16	0	FOOTINGS & PLINTHS	22500.00	.00	21AUG94	5SEP94	21AUG94	5SEP94	0
86	30	30	0	GRADEBEAMS	50000.00	.00	6SEP94	5OCT94	6SEP94	5OCT94	0
87	14	14	0	BASEMENT FOUNDATION SLABS & BEAMS	15000.00	.00	26AUG94	8SEP94	27AUG94	9SEP94	1
88	21	21	0	BASEMENT WALLS	22500.00	.00	9SEP94	29SEP94	10SEP94	30SEP94	1
89	5	5	0	DAMPROOFING	7500.00	.00	30SEP94	4OCT94	10CT94	5OCT94	1
91	10	10	0	BACKFILL & GRADE UNDER BUILDING	22500.00	.00	6OCT94	15OCT94	6OCT94	15OCT94	0
92	10	10	0	BASEMENT STEPS & LANDINGS	4500.00	.00	6OCT94	15OCT94	13JAN95	24JAN95	101
93	20	20	0	30% UNDERFLOOR MECH. & ELEC. R	59000.00	.00	16OCT94	4NOV94	16OCT94	4NOV94	0
94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	87500.00	.00	5NOV94	24DEC94	5NOV94	24DEC94	0
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	135000.00	.00	5NOV94	24DEC94	5NOV94	24DEC94	0
97	18	18	0	CONCRETE TOPPING FILL	27500.00	.00	25DEC94	11JAN95	7FEB95	24FEB95	44
98	63	63	0	ELECTRICAL ROUGH IN	100000.00	.00	25DEC94	25FEB95	4FEB95	7APR95	41
99	70	70	0	MECHANICAL & PLUMBING ROUGH IN	105000.00	.00	25DEC94	4MAR95	28JAN95	7APR95	34
100	5	5	0	ERECT STEEL COLUMNS & METAL DUCKS	5000.00	.00	25DEC94	29DEC94	25DEC94	29DEC94	0

Figure 5-1 · C0nt.

Oygreen Construction Company

REPORT DATE 6MAR95 RUN NO. 54

13:09

SCHEDULE REPORT WITH ACTIVITY BUDGETS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95

DATA DATE 1JUL94 PAGE NO. 5

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	BUDGET	EARNED	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
102	10	10	0	ERECT STRUCTURAL STEEL & JOISTS	17500.00	.00	30DEC94	8JAN95	30DEC94	8JAN95	0
103	27	27	0	EXTERIOR MASONRY WALLS	47500.00	.00	30DEC94	25JAN95	25JAN95	20FEB95	26
108	14	14	0	INSTALL METAL DOORS & ALUMINUM ENTRANCE	10000.00	.00	26JAN95	8FEB95	11MAR95	24MAR95	44
109	12	12	0	INSTALL ROOF DECK	47500.00	.00	9JAN95	20JAN95	9JAN95	20JAN95	0
110	21	21	0	ROOFING & SHEET METAL	80000.00	.00	21JAN95	10FEB95	21JAN95	10FEB95	0
111	14	14	0	INSTALL METAL WINDOWS	2500.00	.00	2JAN95	15JAN95	28JAN95	10FEB95	26
113	56	56	0	AIRCONDITIONING DUCTWORK	115000.00	.00	11FEB95	7APR95	11FEB95	7APR95	0
114	42	42	0	INTERIOR PARTITIONS	85000.00	.00	11FEB95	24MAR95	25FEB95	7APR95	14
116	14	14	0	STUCCO	10000.00	.00	11FEB95	24FEB95	25MAR95	7APR95	42
120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	27500.00	.00	8APR95	21APR95	8APR95	21APR95	0
121	14	14	0	PLASTER WALLS	5000.00	.00	25MAR95	7APR95	20APR95	3MAY95	26
122	22	22	0	CERAMIC TILE	22500.00	.00	25MAR95	15APR95	12APR95	3MAY95	18
124	35	35	0	ACOUSTIC & OTHER CEILINGS	35000.00	.00	22APR95	26MAY95	27APR95	31MAY95	5
125	12	12	0	PLASTER CEILINGS	4000.00	.00	22APR95	3MAY95	22APR95	3MAY95	0
128	17	17	0	TOILET PARTITIONS & ACCESSORIES	3500.00	.00	16APR95	2MAY95	17JUL95	2AUG95	92
130	28	28	0	30% PAINT & FINISH	19500.00	.00	4MAY95	31MAY95	4MAY95	31MAY95	0
133	70	70	0	INSTALL MECHANICAL EQUIPMENT	25000.00	.00	4MAY95	12JUL95	18MAY95	26JUL95	14
139	45	45	0	50% COMPLETE PAINT & FINISH	32500.00	.00	1JUN95	15JUL95	1JUN95	15JUL95	0
140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	15000.00	.00	1JUN95	12JUL95	15JUN95	26JUL95	14
141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT	12500.00	.00	1JUN95	30JUN95	27JUN95	26JUL95	26
142	14	14	0	VINYL WALL COVER	5000.00	.00	1JUN95	14JUN95	20JUL95	2AUG95	49
143	16	16	0	INSTALL 50% MILLWORK	7500.00	.00	1JUN95	16JUN95	13JUN95	20JUN95	12
144	21	21	0	INSTALL RESILIENT FLOORS	7500.00	.00	1JUN95	21JUN95	8JUN95	28JUN95	7
146	16	16	0	COMPLETE MILLWORK	7500.00	.00	17JUN95	2JUL95	30JUN95	15JUL95	13

Figure 5-1 Cont.

31 Oct 97

ACTIVITY ID	ORIG REN DUR	DUR	%	ACTIVITY DESCRIPTION BUDGET	EARNSD	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION .00	.00	22JUN95	24JUN95	31JUL95	2AUG95	39
151	24	24	0	INSTALL CASEWORK 15000.00	.00	22JUN95	15JUL95	10JUL95	2AUG95	18
152	35	35	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT 20000.00	.00	22JUN95	26JUL95	29JUN95	2AUG95	7
153	14	14	0	INSTALL MISCELLANEOUS BUILDING EQUIPMENT 4000.00	.00	22JUN95	5JUL95	20JUL95	2AUG95	28
154	10	10	0	INSTALL DOOR CANOPIES & SIGNS 2500.00	.00	26JAN95	4FEB95	24JUL95	2AUG95	179
155	18	18	0	20X PAINT & FINISH 13000.00	.00	16JUL95	2AUG95	16JUL95	2AUG95	0
156	7	7	0	CLEAN UP BUILDING 5000.00	.00	3AUG95	9AUG95	3AUG95	9AUG95	0
157	45	45	0	DELIVER OUTSIDE ELEC. & PLUMBING MAT. .00	.00	16AUG94	29SEP94	18DEC94	31JAN95	124
160	60	60	0	DELIVER & INSTALL STORM DRAINA 50000.00	.00	21AUG94	19OCT94	3MAR95	1MAY95	194
161	45	45	0	OUTSIDE PLUMBING 35000.00	.00	30SEP94	13NOV94	10MAR95	1MAY95	169
162	90	90	0	OUTSIDE ELECTRICAL 120000.00	.00	30SEP94	28DEC94	1FEB95	1MAY95	124
167	42	42	0	SUBGRADE & BASE FOR PAVING 67300.00	.00	29DEC94	8FEB95	2MAY95	12JUN95	124
168	21	21	0	CURB & GUTTER 20000.00	.00	9FEB95	1MAR95	13JUN95	3JUL95	124
169	21	21	0	SIDEWALKS 20000.00	.00	2MAR95	22MAR95	4JUL95	24JUL95	124
170	10	10	0	ASPHALT PAVING 32500.00	.00	2MAR95	11MAR95	15JUL95	24JUL95	133
172	16	16	0	TOPSOIL & FINE GRADING 10000.00	.00	23MAR95	7APR95	25JUL95	9AUG95	124
173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT 15000.00	.00	13JUL95	26JUL95	27JUL95	9AUG95	14
174	5	5	0	SELL JOB 5000.00	.00	10AUG95	14AUG95	10AUG95	14AUG95	0
<hr/>										
REPORT TOTAL						3000000.00	.00			

Figure 5-1 Cont.

6. 11 Construction Company

REPORT DATE 13NOV96 RUN NO. 41
9:44
EARLY FINISH NEXT TWO MONTHS

PRIMAVERA PROJECT PLANN.

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL96 FIN DATE 14AUG95+
DATA DATE 1JUL96 PAGE NO. 1

ACTIVITY ID	ORIG REN DUR	RUN DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL96	1JUL96	1JUL96	1JUL96	0
2	7	7	0	MOBILIZE & LAYOUT	2JUL96	8JUL96	27JUL96	2AU96	23
27	15	15	0	CONCRETE DESIGN MIX	2JUL96	16JUL96	6AU96	20AUG96	35
4	20	20	0	SUBMIT SHOP DRAWINGS PAN FORMS	2JUL96	21JUL96	17AU96	5SEP96	46
5	20	20	0	SUBMIT SHOP DRAWINGS METAL DOORS	2JUL96	21JUL96	22AU96	10SEP96	51
30	14	14	0	ROUGH GRADE & EXCAVATE BUILDIN	9JUL96	22JUL96	3AU96	16AU96	23
9	30	30	0	SUBMIT & APPROVE MECH/ELEC R.I	2JUL96	31JUL96	3JUL96	1AU96	1
6	30	30	0	SUBMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	2JUL96	31JUL96	12AUG96	10SEP96	41
33	30	30	0	SUBMIT SHOP DRAWINGS METAL WINDOWS	2JUL96	31JUL96	10SEP96	9OCT96	70
7	30	30	0	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	2JUL96	31JUL96	12SEP96	11OCT96	72
17	30	30	0	SUBMIT ROOF & SHEET MET SHP DRAWS . WINGS	2JUL96	31JUL96	8OCT96	6NOV96	98
12	30	30	0	SUBMIT PLUMBING FIXTURES & MEC	2JUL96	31JUL96	20OCT96	18NOV96	110
18	30	30	0	SUBMIT X-RAY PROTECTION	2JUL96	31JUL96	23OCT96	21NOV96	113
28	30	30	0	PRE-QUALIFY WELDERS	2JUL96	31JUL96	30NOV96	29DEC96	151
13	30	30	0	SUBMIT ELECTRIC FIXTURES & EQUIP.	2JUL96	31JUL96	17DEC96	15JAN93	168
22	30	30	0	SUBMIT SHOP DRAWINGS MILLWORK	2JUL96	31JUL96	23DEC96	23JAN93	176
20	30	30	0	SUBMIT PAINT SAMPLES	2JUL96	31JUL96	19JAN93	17FEB93	201
23	30	30	0	SUBMIT RESILIENT FLOOR SAMPLES	2JUL96	31JUL96	23FEB93	26MAR93	236
26	30	30	0	SUBMIT MISC. BUILDING EQUIPMENT	2JUL96	31JUL96	2MAR93	31MAR93	243
21	30	30	0	SUBMIT VINYL WALL COVERING	2JUL96	31JUL96	22MAR93	20APR93	263
15	35	35	0	SUBMIT & APPROVE SHOP DRWS. REINF. STEEL	2JUL96	5AUG96	2JUL96	3AUG96	0
35	15	15	0	GOVERNMENT APPROVE PAN FORMS	22JUL96	5AUG96	6SEP96	20SEP96	46
36	15	15	0	GOVERNMENT APPROVE METAL DOOR	22JUL96	5AUG96	11SEP96	25SEP96	51
31	32	32	0	DEMOLITION & SITE GRADING	9JUL96	9AUG96	31DEC96	31JAN93	173

Figure 5-2

REPORT DATE 15NOV94 RUN NO. 41

9:44

EARLY FINISH NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DR DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95*

DATA DATE 1JUL94 PAGE NO. 2

ACTIVITY ID	ORIG REM DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AUG94	15AUG94	2AUG94	16AUG94	1
8	45	45	0	SUBMIT SHOP DRWGS. ALUM. ENTR	2JUL94	15AUG94	7OCT94	20NOV94	97
50	15	15	0	GOVERNMENT APPROVE ROOF & SHEE	1AUG94	15AUG94	7NOV94	21NOV94	98
14	45	45	0	SUBMIT & APPROVE SHOP DRWG. MISC. METAL	2JUL94	15AUG94	17OCT94	30NOV94	107
23	45	45	0	SUBMIT HOSPITAL & MISC. EQUIPMENT	2JUL94	15AUG94	17OCT94	30NOV94	107
32	45	45	0	SUBMIT & APPROVE MASONRY MATER	2JUL94	15AUG94	25OCT94	8DEC94	113
16	45	45	0	SUBMIT & APPROVE ROOF DECK SHD	2JUL94	15AUG94	26OCT94	9DEC94	116
29	45	45	0	SUBMIT & APPROVE SHP DRWGS OS E	2JUL94	15AUG94	3NOV94	17DEC94	124
24	45	45	0	SUBMIT SHOP DRAWINGS CASEWORK	2JUL94	15AUG94	27NOV94	10JAN95	148
10	45	45	0	SUBMIT CERAMIC TILE	2JUL94	15AUG94	13DEC94	26JAN95	164
9	45	45	0	SUBMIT LATH & PLASTER	2JUL94	15AUG94	25DEC94	7FEB95	176
11	45	45	0	SUBMIT TOILET PARTITIONS & ACC	2JUL94	15AUG94	12FEB95	20MAR95	223
19	45	45	0	SUBMIT & APPROVE DOOR CANOPIES	2JUL94	15AUG94	26MAR95	9MAY95	267
48	15	15	0	DELIVER REINFORCING STEEL	6AUG94	20AUG94	6AUG94	20AUG94	0
37	20	20	0	GOVERNMENT APPROVE STRUCT. STE	1AUG94	20AUG94	11SEP94	30SEP94	41
39	20	20	0	GOVERNMENT APPROVE METAL WINDO	1AUG94	20AUG94	10OCT94	29OCT94	70
51	20	20	0	GOVERNMENT APPROVE X-RAY PROTE	1AUG94	20AUG94	22NOV94	11DEC94	113
55	20	20	0	GOVERNMENT APPROVE MILLWORK	1AUG94	20AUG94	24JAN95	12FEB95	176
59	20	20	0	GOVERNMENT APPROVE MISC. BUILD	1AUG94	20AUG94	1APR95	20APR95	243
62	10	10	0	ROUGH IN UNDER BASEMENT	16AUG94	23AUG94	17AUG94	26AUG94	1
40	30	30	0	GOVERNMENT APPROVE BUILDER'S N	1AUG94	30AUG94	12OCT94	10NOV94	72
45	30	30	0	GOVT. APPROVE PLUMB. FIXTURES	1AUG94	30AUG94	19NOV94	16DEC94	110
46	30	30	0	GOVERNMENT APPROVE ELEC. FIXTU	1AUG94	30AUG94	16JAN95	14FEB95	168
42	15	15	0	GOVERNMENT APPROVE LATH & PLAS	16AUG94	30AUG94	8FEB95	22FEB95	176

Figure 5-2 Cont.

g1... Construction Company

REPORT DATE 15NOV94 RUN NO. 41

9:44

EARLY FINISH NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 16AUG95*

DATA DATE 1JUL94 PAGE NO. 3

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
53	30	30	0	GOVERNMENT TEST & APPROVE PAINT	1AUG94	30AUG94	18FEB95	19MAR95	201
56	30	30	0	GOVERNMENT APPROVE & COLOR SEL	1AUG94	30AUG94	25MAR95	23APR95	236
94	30	30	0	GOVERNMENT APPROVE COLOR Samp.	1AUG94	30AUG94	21APR95	20MAY95	263

5-11

Figure 5-2 Cont.

REPORT DATE 10JUL94 RUN NO. 40

9:32

TRIMASTER PROJECT PLANNER FREQUENCY REPORT

START DATE 1JULY94 FIN DATE 19AUG94

EARLY START NEXT TWO MONTHS

DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG REM DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
19	35	35	0	SUBMIT & APPROVE SHOP DRAW. REINF. STEEL	2JUL94	31AUG94	2JUL94	31AUG94	0
3	30	30	0	SUBMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AU094	1
2	7	7	0	MOBILIZE & LAYOUT	2JUL94	8JUL94	27JUL94	2AU094	23
27	15	15	0	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AU094	20AU094	33
6	30	30	0	SUBMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	2JUL94	31JUL94	12AU094	10SEP94	41
4	20	20	0	SUBMIT SHOP DRAWINGS PAN FORMS	2JUL94	21JUL94	17AUG94	5SEP94	46
5	20	20	0	SUBMIT SHOP DRAWINGS METAL DOORS	2JUL94	21JUL94	22AU094	10SEP94	51
33	30	30	0	SUBMIT SHOP DRAWINGS METAL WINDOWS	2JUL94	31JUL94	10SEP94	9OCT94	70
7	30	30	0	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	2JUL94	31JUL94	12SEP94	11OCT94	72
8	45	45	0	SUBMIT SHOP DRAW. ALUM. ENTR	2JUL94	15AUG94	7OCT94	2NOV94	97
17	30	30	0	SUBMIT ROOF & SHEET MET SHP DRAW . .WINGS	2JUL94	31JUL94	8OCT94	6NOV94	98
14	45	45	0	SUBMIT & APPROVE SHOP DRAW. MISC. METAL	2JUL94	15AUG94	17OCT94	3NOV94	107
23	45	45	0	SUBMIT HOSPITAL & MISC. EQUIPMENT	2JUL94	15AUG94	17OCT94	3NOV94	107
12	30	30	0	SUBMIT PLUMBING FIXTURES & MEC	2JUL94	31JUL94	20OCT94	18NOV94	110
18	30	30	0	SUBMIT X-RAY PROTECTION	2JUL94	31JUL94	23OCT94	21NOV94	113
32	45	45	0	SUBMIT & APPROVE MASONRY.MATER	2JUL94	15AUG94	29OCT94	8DEC94	115
16	45	45	0	SUBMIT & APPROVE ROOF DECK SHD	2JUL94	15AUG94	26OCT94	9DEC94	116
29	45	45	0	SUBMIT & APPROVE SHP DRAW OS E	2JUL94	15AUG94	3NOV94	17DEC94	124
24	45	45	0	SUBMIT SHOP DRAWINGS CASEWORK	2JUL94	15AUG94	27NOV94	10JAN95	148
28	30	30	0	PRE-QUALITY WELDERS	2JUL94	31JUL94	3NOV94	29DEC94	151
10	45	45	0	SUBMIT CERAMIC TILE	2JUL94	15AUG94	13DEC94	26JAN95	164
13	30	30	0	SUBMIT ELECTRIC FIXTURES & EQUIP.	2JUL94	31JUL94	17DEC94	15JAN95	168
9	45	45	0	SUBMIT LATH & PLASTER	2JUL94	15AUG94	29DEC94	7FEB95	176

Figure 5-3

76 100
1-11-94
31 Oct 94

BACI Construction Company

REPORT DATE 15NOV94 RUN NO. 40
9:32
EARLY START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95

DATA DATE 1JUL94 PAGE NO. 2

ACTIVITY ID	ORIG REN DUR	DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
22	30	30	0	SUBMIT SHOP DRAWINGS MILLWORK	2JUL94	31JUL94	25DEC94	23JAN95	176
20	30	30	0	SUBMIT PAINT SAMPLES	2JUL94	31JUL94	19JAN95	17FEB95	201
11	45	45	0	SUBMIT TOILET PARTITIONS & ACC	2JUL94	15AUG94	12FEB95	20MAR95	223
23	30	30	0	SUBMIT RESILIENT FLOOR SAMPLES	2JUL94	31JUL94	23FEB95	24MAR95	236
26	30	30	0	SUBMIT MISC. BUILDING EQUIPMENT	2JUL94	31JUL94	2MAY95	31MAY95	243
21	30	30	0	SUBMIT VINYL WALL COVERING	2JUL94	31JUL94	22MAR95	20APR95	263
19	45	45	0	SUBMIT & APPROVE DOOR CANOPIES	2JUL94	15AUG94	26MAR95	5MAY95	267
30	14	14	0	ROUGH GRADE & EXCAVATE BUILDIN	9JUL94	22JUL94	3AU94	16AU94	23
31	32	32	0	DEMOLITION & SITE GRADING	9JUL94	9AU94	31DEC94	31JAN95	175
35	15	15	0	GOVERNMENT APPROVE PAN FORMS	22JUL94	9AU94	6SEP94	20SEP94	46
36	15	15	0	GOVERNMENT APPROVE METAL DOOR	22JUL94	9AU94	11SEP94	25SEP94	51
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AU94	19AU94	2AU94	16AU94	1
37	20	20	0	GOVERNMENT APPROVE STRUCT. STE	1AU94	20AU94	11SEP94	30SEP94	41
39	20	20	0	GOVERNMENT APPROVE METAL WINDO	1AU94	20AU94	10OCT94	29OCT94	70
40	30	30	0	GOVERNMENT APPROVE BUILDER'S H	1AU94	30AU94	12OCT94	10NOV94	72
50	15	15	0	GOVERNMENT APPROVE ROOF & SHEE	1AU94	19AU94	7NOV94	21NOV94	98
43	30	30	0	GOVT. APPROVE PLUMB. FIXTURES	1AU94	30AU94	19NOV94	18DEC94	110
31	20	20	0	GOVERNMENT APPROVE X-RAY PROTE	1AU94	20AU94	22NOV94	11DEC94	113
46	30	30	0	GOVERNMENT APPROVE ELEC. FIXTU	1AU94	30AU94	16JAN95	14FEB95	168
53	20	20	0	GOVERNMENT APPROVE MILLWORK	1AU94	20AU94	26JAN95	12FEB95	176
53	30	30	0	GOVERNMENT TEST & APPROVE PAINT	1AU94	30AU94	18FEB95	19MAR95	201
56	30	30	0	GOVERNMENT APPROVE & COLOR SEL	1AU94	30AU94	25MAR95	23APR95	236
59	20	20	0	GOVERNMENT APPROVE MISC. BUILD	1AU94	20AU94	1APR95	20APR95	243
56	30	30	0	GOVERNMENT APPROVE COLOR SAMP.	1AU94	30AU94	21APR95	20MAY95	263

Figure 5-3 Cont.

REPORT DATE 10NOV94 RUN NO. 40
9:32
EARLY START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*
DATA DATE 1JUL94 PAGE NO. 3

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
48	15	15	0	DELIVER REINFORCING STEEL	16AUG94	20AUG94	16AUG94	20AUG94	0
63	45	45	0	DELIVER PAN FORMS	16AUG94	19SEP94	21SEP94	4NOV94	46
64	90	90	0	FABRICATE & DELIVER METAL DOORS	16AUG94	3NOV94	26SEP94	24DEC94	51
62	10	10	0	ROUGH IN UNDER BASEMENT	16AUG94	23AUG94	17AUG94	26AUG94	9
41	20	20	0	GOVERNMENT APP. ALUM. ENTRANCE	16AUG94	4SEP94	21NOV94	10DEC94	97
76	60	60	0	FABRICATE & DELIVER SHEETMETAL\ROOF	16AUG94	14OCT94	22NOV94	20JAN95	98
47	45	45	0	FABRICATE & DELIVER MISC. METALS	16AUG94	29SEP94	10DEC94	14JAN95	107
58	30	30	0	GOVERNMENT APPROVE HOSPITAL B	16AUG94	14SEP94	10DEC94	30DEC94	107
38	45	45	0	DELIVER MASONRY MATERIALS	16AUG94	29SEP94	9DEC94	22JAN95	119
49	30	30	0	DELIVER ROOF DECK MATERIALS	16AUG94	14SEP94	10DEC94	8JAN95	116
157	45	45	0	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	16AUG94	29SEP94	10DEC94	31JAN95	124
57	30	30	0	GOVERNMENT APPROVE CASEWORK	16AUG94	14SEP94	11JAN95	9FEB95	148
43	30	30	0	GOVERNMENT APPROVE CERAMIC TIL	16AUG94	14SEP94	27JAN95	25FEB95	164
42	15	15	0	GOVERNMENT APPROVE LATH & PLAS	16AUG94	30AUG94	8FEB95	22FEB95	176
44	20	20	0	GOVERNMENT APPROVE TOILET PART	16AUG94	4SEP94	29MAR95	17APR95	225
52	75	75	0	DELIVER DOOR CANopies & SIGNS	16AUG94	29OCT94	10MAY95	23JUL95	267
85	16	16	0	FOOTINGS & PLINTHS	21AUG94	5SEP94	21AUG94	5SEP94	0
66	90	90	0	FABRICATE & DELIVER STRUCT. STEEL	21AUG94	16NOV94	10C1994	29DEC94	61
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	21AUG94	16NOV94	30OCT94	27JAN95	70
69	45	45	0	FABRICATE & DELIVER STEEL COLUMNS	21AUG94	4OCT94	10NOV94	24DEC94	81
77	75	75	0	DELIVER PROTECTION MATERIALS	21AUG94	3NOV94	12DEC94	24FEB95	113
80	120	120	0	FABRICATE & DELIVER MILLWORK	21AUG94	18DEC94	13FEB95	12JUN95	176
160	60	60	0	DELIVER & INSTALL STORM DRAINS	21AUG94	19OCT94	5MAY95	19JUL95	196
84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	21AUG94	16NOV94	21APR95	19JUL95	243

Figure 5-3 Cont.

EP
415-1-4
31 Oct 97

Hoyle, Hansen Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 15NOV96 RUN NO. 40
9:32
EARLY START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL96 FIN DATE 14AUG95*
DATA DATE 1JUL96 PAGE NO. 4

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
87	14	14	0	BASEMENT FOUNDATION SLABS & BEAMS	26AUG96	03SEP96	27AUG96	03SEP96	1
69	120	120	0	DELIVER BUILDER'S HARDWARE	31AUG96	28DEC96	11NOV96	10MAY97	72
74	150	150	0	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	31AUG96	27JAN97	19DEC96	17MAY97	110
75	120	120	0	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	31AUG96	28DEC96	15FEB97	14JUN97	168
71	30	30	0	DELIVER LATH & PLASTER MATERIALS	31AUG96	29SEP96	23FEB97	24MAY97	176
78	45	45	0	DELIVER PAINT MATERIALS	31AUG96	14OCT96	20MAY97	3MAY97	201
81	45	45	0	DELIVER RESILIENT FLOOR MATERIALS	31AUG96	14OCT96	24APR97	7JUN97	236
79	60	60	0	DELIVER VINYL WALL COVERING	31AUG96	29OCT96	21MAY97	19JUL97	263

Figure 5-3 Cont.

REPORT DATE 15NOV94 RUN NO. 47
10:12
GOVERNMENT RESPONSIBILITY

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*
DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
35	15	15	0	GOVERNMENT APPROVE PAN FORMS	22JUL94	5AUG94	6SEP94	20SEP94	46
36	15	15	0	GOVERNMENT APPROVE METAL DOOR	22JUL94	5AUG94	11SEP94	25SEP94	31
37	20	20	0	GOVERNMENT APPROVE STRUCT. STE	1AUG94	20AUG94	11SEP94	30SEP94	41
39	20	20	0	GOVERNMENT APPROVE METAL WINDO	1AUG94	20AUG94	10OCT94	29OCT94	70
40	30	30	0	GOVERNMENT APPROVE BUILDER'S H	1AUG94	30AUG94	12OCT94	10NOV94	72
43	30	30	0	GOVT. APPROVE PLUMB. FIXTURES	1AUG94	30AUG94	19NOV94	18DEC94	110
46	30	30	0	GOVERNMENT APPROVE ELEC. FIXTU	1AUG94	30AUG94	16JAN95	14FEB95	168
50	15	15	0	GOVERNMENT APPROVE ROOF & SHEE	1AUG94	15AUG94	7NOV94	21NOV94	98
51	20	20	0	GOVERNMENT APPROVE X-RAY PROTE	1AUG94	20AUG94	22NOV94	11DEC94	113
53	30	30	0	GOVERNMENT TEST & APPROVE PAINT	1AUG94	30AUG94	18FEB95	19MAR95	201
54	30	30	0	GOVERNMENT APPROVE COLOR SWP.	1AUG94	30AUG94	21APR95	20MAY95	263
55	20	20	0	GOVERNMENT APPROVE MILLWORK	1AUG94	20AUG94	24JAN95	12FEB95	176
56	30	30	0	GOVERNMENT APPROVE & COLOR SEL	1AUG94	30AUG94	25MAR95	23APR95	236
59	20	20	0	GOVERNMENT APPROVE HISC. BUILD	1AUG94	20AUG94	1APR95	20APR95	263
41	20	20	0	GOVERNMENT APP. ALUM. ENTRANCE	16AUG94	4SEP94	21NOV94	10DEC94	97
42	15	15	0	GOVERNMENT APPROVE LATIN & PLAB	16AUG94	30AUG94	8FEB95	22FEB95	176
43	30	30	0	GOVERNMENT APPROVE CERAMIC TIL	16AUG94	14SEP94	27JAN95	25FEB95	164
44	20	20	0	GOVERNMENT APPROVE TOILET PART	16AUG94	4SEP94	29MAR95	17APR95	225
57	30	30	0	GOVERNMENT APPROVE CAVework	16AUG94	14SEP94	11JAN95	9FEB95	148
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	16AUG94	14SEP94	1DEC94	30DEC94	107
150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION	22JUN95	24JUN95	31JUL95	2AUG95	39

Figure 5-4

g Construction Company

PRIMAVERA PROJECT PLANNING

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 15NOV94 RUN NO. 43

9:35

LATE FINISH NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AU095*

DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
3	30	30	0	SUMMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AU094	1
2	7	7	0	MOBILIZE & LAYOUT	2JUL94	8JUL94	27JUL94	2AU094	23
15	35	35	0	SUMMIT & APPROVE SHOP DRUG. REINF. STEEL	2JUL94	5AU094	2JUL94	5AU094	0
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AU094	19AU094	2AU094	16AU094	1
30	14	14	0	ROUGH GRADE & EXCAVATE BUILDIN	9JUL94	22JUL94	3AU094	16AU094	23
48	15	15	0	DELIVER REINFORCING STEEL	6AU094	20AU094	6AU094	20AU094	0
27	15	15	0	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AU094	20AU094	35
62	10	10	0	ROUGH IN UNDER BASEMENT	16AU094	25AU094	17AU094	26AU094	1

REPORT DATE 15NOV94 RUN NO. 42

9:51

LATE START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*

DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
13	35	35	0	SUMMIT & APPROVE SHOP DRWGS. REINF. STEEL	2JUL94	31AUG94	2JUL94	31AUG94	0
3	30	30	0	SUMMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AUG94	1
2	7	7	0	MOBILIZE & LAYOUT	2JUL94	8JUL94	27JUL94	2AU94	23
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AU94	15AUG94	2AU94	16AUG94	1
30	14	14	0	ROUGH GRADE & EXCAVATE BUILDING	9JUL94	22JUL94	3AU94	16AUG94	23
48	15	15	0	DELIVER REINFORCING STEEL	6AU94	20AU94	6AU94	20AU94	0
27	15	15	0	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AU94	20AU94	33
6	30	30	0	SUMMIT SHOP DRAWINGS STRUCT. OTL. & JOISTS	2JUL94	31JUL94	12AU94	10SEP94	41
62	10	10	0	ROUGH IN UNDER BASEMENT	16AU94	25AU94	17AU94	26AU94	1
4	20	20	0	SUMMIT SHOP DRAWINGS PAN FORMS	2JUL94	21JUL94	17AUG94	9SEP94	46
83	16	16	0	FOOTINGS & PLEINTHS	21AU94	5SEP94	21AU94	5SEP94	0
5	20	20	0	SUMMIT SHOP DRAWINGS METAL DOORS	2JUL94	21JUL94	22AUG94	10SEP94	51
87	14	14	0	BASEMENT FOUNDATION SLABS & BEAMS	26AU94	8SEP94	27AU94	9SEP94	1

CT-18

Figure 5-6

Construction Company
REPORT DATE 15NOV94 RUN NO. 46
10:07
MECHANICAL ELECTRICAL SCHEDULE

PRIMAVERA PROJECT
PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS
START DATE 1JUL94 FIN DATE 16AUG95+
DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNED	SCHEDULED START	FINISH
3	30	30	0	SUBMIT & APPROVE MECH/ELEC R.I.	.00	.00	2JUL94	31JUL94
12	30	30	0	SUBMIT PLUMBING FIXTURES & MEC	.00	.00	2JUL94	31JUL94
13	30	30	0	SUBMIT ELECTRIC FIXTURES & EQUIP.	.00	.00	2JUL94	31JUL94
29	45	45	0	SUBMIT & APPROVE SHP DRWGS OF E	.00	.00	2JUL94	15AUG94
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT. 65000.00	.00	.00	1AUG94	15AUG94
157	45	45	0	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	.00	.00	16AUG94	29SEP94
75	120	120	0	DELIVER ELECTRICAL FIXTURES & EQUIPMENT 115000.00	.00	.00	31AUG94	28DEC94
74	150	150	0	DELIVER PLUMB. FIXTURES & MECH. EQUIP. 215000.00	.00	.00	31AUG94	27JAN95
161	45	45	0	OUTSIDE PLUMBING 35000.00	.00	.00	30SEP94	13NOV94
162	90	90	0	OUTSIDE ELECTRICAL 120000.00	.00	.00	30SEP94	28DEC94
93	20	20	0	30% UNDERFLOOR MECH. & ELEC. R 59000.00	.00	.00	16OCT94	4NOV94
93	50	50	0	70% UNDERFLOOR MECH. & ELEC. R 135000.00	.00	.00	5NOV94	24DEC94
98	63	63	0	ELECTRICAL ROUGH IN 100000.00	.00	.00	25DEC94	23FEB95
99	70	70	0	MECHANICAL & PLUMBING ROUGH IN 105000.00	.00	.00	25DEC94	4MARCH95
113	56	56	0	AIRCONDITIONING DUCTWORK 115000.00	.00	.00	11FEB95	7APR95
133	70	70	0	INSTALL MECHANICAL EQUIPMENT 25000.00	.00	.00	4MAY95	12JUL95
141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT 12500.00	.00	.00	1JUN95	30JUN95
140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT 19000.00	.00	.00	1JUN95	12JUL95
173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT 15000.00	.00	.00	13JUL95	26JUL95
<hr/>								
REPORT TOTAL				1131900.00	.00			

Figure 5-7

ACTIVITY ID	DRG REM DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
15	35	35	0	SUBMIT & APPROVE SHOP DRWG. REINF. STEEL	2JUL94	3AUG94	2JUL94	3AUG94	0
48	15	15	0	DELIVER REINFORCING STEEL	6AUG94	20AUG94	6AUG94	20AUG94	0
85	16	16	0	FOOTINGS & PLINTHS	21AUG94	9SEP94	21AUG94	9SEP94	0
86	30	30	0	GRADEBEAMS	6SEP94	5OCT94	6SEP94	5OCT94	0
91	10	10	0	BACKFILL & GRADE UNDER BUILDING	6OCT94	19OCT94	6OCT94	19OCT94	0
93	20	20	0	30X UNDERFLOOR MECH. & ELEC. R.	16OCT94	4NOV94	16OCT94	4NOV94	0
94	50	50	0	FORM, PLACE, & CURE PAV SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
95	50	50	0	70X UNDERFLOOR MECH. & ELEC. R.	5NOV94	24DEC94	5NOV94	24DEC94	0
100	3	3	0	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
102	10	10	0	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	8JAN95	30DEC94	8JAN95	0
109	12	12	0	INSTALL ROOF DECK	9JAN95	20JAN95	9JAN95	20JAN95	0
110	21	21	0	ROOFING & SHEET METAL	21JAN95	10FEB95	21JAN95	10FEB95	0
113	56	56	0	AIRCONDITIONING DUCTWORK	11FEB95	7APR95	11FEB95	7APR95	0
120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	8APR95	21APR95	8APR95	21APR95	0
125	12	12	0	PLASTER CEILINGS	22APR95	3MAY95	22APR95	3MAY95	0
130	20	20	0	30X PAINT & FINISH	4MAY95	3IMAY95	4MAY95	3IMAY95	0
139	45	45	0	50X COMPLETE PAINT & FINISH	1JUN95	19JUL95	1JUN95	19JUL95	0
155	18	18	0	20X PAINT & FINISH	16JUL95	2AU95	16JUL95	2AU95	0
156	7	7	0	CLEAN UP BUILDING	3AUG95	9AUG95	3AUG95	9AUG95	0
174	5	5	0	SELL JOB	10AUG95	14AUG95	10AUG95	14AUG95	0
3	30	30	0	SUBMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AUG94	1
34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AUG94	15AUG94	2AUG94	16AUG94	1
62	10	10	0	ROUGH IN UNDER BASEMENT	16AUG94	23AUG94	17AUG94	26AUG94	1

Figure 5-8

Moyd Construction Company
REPORT DATE 13NOV96 RUN NO. 44
9:57
TOTAL FLOAT LESS THAN 14 DAYS

PRIMAVERA PROJECT PLANNER
PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS
START DATE 1JUL96 FIN DATE 14AUG93⁴
DATA DATE 1JUL96 PAGE NO. 2

ACTIVITY ID	ORIG REM DUR	NEW DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
87	14	14	0	BASEMENT FOUNDATION SLABS & BEAMS	26MAY96	8SEP96	27MAY96	9SEP96	1
88	21	21	0	BASEMENT WALLS	9SEP96	29SEP96	10SEP96	30SEP96	1
89	9	9	0	DAMPPROOFING	30SEP96	6OCT96	10CT96	30CT96	1
124	39	39	0	ACOUSTIC & OTHER CEILINGS	22APR95	26MAY95	27APR95	31MAY95	3
144	21	21	0	INSTALL RESILIENT FLOORS	1JUN95	21JUN95	8JUN95	28JUN95	7
152	39	39	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN95	26JUL95	29JUN95	2AU95	7
143	16	16	0	INSTALL SOX MILLWORK	1JUN95	16JUN95	13JUN95	28JUN95	12
146	16	16	0	COMPLETE MILLWORK	17JUN95	2JUL95	30JUN95	19JUL95	13

Figure 5-8 Cont.

REPORT DATE 16NOV94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REN DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT	
1	1	1	0	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0	
2*	7	7	0 SU	MOBILIZE & LAYOUT	2JUL94	8JUL94	27JUL94	2AUG94	25	
3*	30	30	0 SU	SUMMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AUG94	1	
4*	20	20	0 SU	SUMMIT SHOP DRAWINGS PAN FORMS	2JUL94	21JUL94	17AUG94	5SEP94	46	
5*	20	20	0 SU	SUMMIT SHOP DRAWINGS METAL DOORS	2JUL94	21JUL94	22AU94	10SEP94	51	
6*	30	30	0 SU	SUMMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	2JUL94	31JUL94	12AU94	10SEP94	41	
7*	30	30	0 SU	SUMMIT LISTS & SAMPLES BUILDERS HARDWARE	2JUL94	31JUL94	12SEP94	11OCT94	72	
8*	45	45	0 SU	SUMMIT SHOP DRUGS. ALUM. EXTRU	2JUL94	15AUG94	7OCT94	20NOV94	97	
9*	45	45	0 SU	SUMMIT LATH & PLASTER	2JUL94	15AUG94	25DEC94	7FEB95	176	
10*	45	45	0 SU	SUMMIT CERAMIC TILE	2JUL94	15AUG94	13DEC94	26JAN95	164	
11*	45	45	0 SU	SUMMIT TOILET PARTITIONS & ACC	2JUL94	15AUG94	12FEB95	20MAR95	225	
12*	30	30	0 SU	SUMMIT PLUMBING FIXTURES & MEC	2JUL94	31JUL94	20OCT94	18NOV94	110	
13*	30	30	0 SU	SUMMIT ELECTRIC FIXTURES & EQUIP.	2JUL94	31JUL94	17DEC94	15JAN95	168	
14*	45	45	0 SU	SUMMIT & APPROVE SHOP DRUGS. MISC. METAL	2JUL94	15AUG94	17OCT94	30NOV94	107	
15*	35	35	0 SU	SUMMIT & APPROVE SHOP DRUGS. REINF. STEEL	2JUL94	5AUG94	2JUL94	5AUG94	0	
16*	45	45	0 SU	SUMMIT & APPROVE ROOF DECK SHD	2JUL94	15AUG94	26OCT94	9DEC94	116	
17*	30	30	0 SU	SUMMIT ROOF & SHEET MET SHD DRAW . VINGS	2JUL94	31JUL94	8OCT94	6NOV94	98	
18*	30	30	0 SU	SUMMIT X-RAY PROTECTION	2JUL94	31JUL94	23OCT94	21NOV94	113	
19*	45	45	0 SU	SUMMIT & APPROVE DOOR CANOPIES	2JUL94	15AUG94	26MAR95	9MAY95	267	
20*	30	30	0 SU	SUMMIT PAINT SAMPLES	2JUL94	31JUL94	19JAN95	17FEB95	201	
21*	30	30	0 SU	SUMMIT VINYL WALL COVERING	2JUL94	31JUL94	22MAR95	20APR95	263	
22*	30	30	0 SU	SUMMIT SHOP DRAWINGS MILLWORK	2JUL94	31JUL94	25DEC94	23JAN95	176	
23*	30	30	0 SU	SUMMIT RESILIENT FLOOR SAMPLES	2JUL94	31JUL94	23FEB95	24MAR95	236	
24*	45	45	0 SU	SUMMIT SHOP DRAWINGS CASEWORK	2JUL94	15AUG94	27NOV94	10JAN95	148	
25*	45	45	0 SU	SUMMIT HOSPITAL & MISC. EQUIPMENT	2JUL94	15AUG94	17OCT94	30NOV94	107	
26*	30	30	0 SU	SUMMIT MISC. BUILDING EQUIPMENT	2JUL94	31JUL94	2MAR95	31MAR95	243	
27*	15	15	0 SU	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AUG94	20AUG94	35	
28*	30	30	0 SU	PRE-QUALIFY WELDERS	2JUL94	31JUL94	30NOV94	29DEC94	151	
29*	45	45	0 SU	SUMMIT & APPROVE SHP DRUG OS E	2JUL94	15AUG94	3NOV94	17DEC94	124	
32*	45	45	0 SU	SUMMIT & APPROVE MASONRY MATER	2JUL94	15AUG94	25OCT94	8DEC94	115	
33*	30	30	0 SU	SUMMIT SHOP DRAWINGS METAL WINDOWS	2JUL94	31JUL94	10SEP94	9OCT94	70	
..	1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
..	2	7	7	0	MOBILIZE & LAYOUT	2JUL94	8JUL94	27JUL94	2AUG94	25
..	30*	14	14	0 SU	ROUGH GRADE & EXCAVATE BUILDIN	9JUL94	22JUL94	3AUG94	16AUG94	25
..	31*	32	32	0 SU	DEMOLITION & SITE GRADING	9JUL94	9AUG94	31DEC94	31JAN95	175
..	1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
..	3	30	30	0	SUMMIT & APPROVE MECH/ELEC R.I.	2JUL94	31JUL94	3JUL94	1AUG94	1
..	34*	15	15	0 SU	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AUG94	15AUG94	2AUG94	16AUG94	1
..	1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
..	4	20	20	0	SUMMIT SHOP DRAWINGS PAN FORMS	2JUL94	21JUL94	17AUG94	5SEP94	46
..	35*	15	15	0 SU	GOVERNMENT APPROVE PAN FORMS	22JUL94	5AUG94	6SEP94	20SEP94	46
..	1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
..	5	20	20	0	SUMMIT SHOP DRAWINGS METAL DOORS	2JUL94	21JUL94	22AU94	10SEP94	51
..	36*	15	15	0 SU	GOVERNMENT APPROVE METAL DOOR	22JUL94	5AUG94	11SEP94	25SEP94	51

ROYAL Construction Company

REPORT DATE 16NOV94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 16NOV95

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 2

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 6	30	30	0 SU	SUBMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	2JUL94	31JUL94	12AUG94	10SEP94	41
.. 37*	20	20	0 SU	GOVERNMENT APPROVE STRUCT. STE	1AUG94	20AUG94	11SEP94	30SEP94	41
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 7	30	30	0 SU	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	2JUL94	31JUL94	12SEP94	11OCT94	72
.. 40*	30	30	0 SU	GOVERNMENT APPROVE BUILDER'S H	1AUG94	30AUG94	12OCT94	10NOV94	72
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 8	45	45	0 SU	SUBMIT SHOP DRWGS. ALUM. ENTRANCE	2JUL94	15AUG94	7OCT94	20NOV94	97
.. 41*	20	20	0 SU	GOVERNMENT APP. ALUM. ENTRANCE	16AUG94	4SEP94	21NOV94	10DEC94	97
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 9	45	45	0 SU	SUBMIT LATH & PLASTER	2JUL94	15AUG94	23DEC94	7FEB95	176
.. 42*	15	15	0 SU	GOVERNMENT APPROVE LATH & PLAS	16AUG94	30AUG94	6FEB95	22FEB95	176
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 10	45	45	0 SU	SUBMIT CERAMIC TILE	2JUL94	15AUG94	13DEC94	26JAN95	164
.. 43*	30	30	0 SU	GOVERNMENT APPROVE CERAMIC TIL	16AUG94	14SEP94	27JAN95	23FEB95	164
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 11	45	45	0 SU	SUBMIT TOILET PARTITIONS & ACC	2JUL94	15AUG94	12FEB95	20MAR95	225
.. 44*	20	20	0 SU	GOVERNMENT APPROVE TOILET PART	16AUG94	4SEP94	29MAR95	17APR95	225
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 12	30	30	0 SU	SUBMIT PLUMBING FIXTURES & MEC	2JUL94	31JUL94	20OCT94	18NOV94	110
.. 45*	30	30	0 SU	GOVT. APPROVE PLUMB. FIXTURES	1AUG94	30AUG94	19NOV94	10DEC94	110
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 13	30	30	0 SU	SUBMIT ELECTRIC FIXTURES & EQUIP.	2JUL94	31JUL94	17DEC94	15JAN95	168
.. 46*	30	30	0 SU	GOVERNMENT APPROVE ELEC. FIXTU	1AUG94	30AUG94	16JAN95	14FEB95	168
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 14	45	45	0 SU	SUBMIT & APPROVE SHOP DRWGS. MISC. METAL	2JUL94	15AUG94	17OCT94	30NOV94	107
.. 47*	45	45	0 SU	FABRICATE & DELIVER MISC. METALS	16AUG94	29SEP94	10DEC94	14JAN95	107
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 15	35	35	0 SU	SUBMIT & APPROVE SHOP DRWGS. REINF. STEEL	2JUL94	5AUG94	2JUL94	5AUG94	0
.. 48*	15	15	0 SU	DELIVER REINFORCING STEEL	6AUG94	20AUG94	6AUG94	20AUG94	0
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 16	45	45	0 SU	SUBMIT & APPROVE ROOF DECK SHD	2JUL94	15AUG94	26OCT94	9DEC94	116
.. 49*	30	30	0 SU	DELIVER ROOF DECK MATERIALS	16AUG94	14SEP94	10DEC94	8JAN95	116
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 17	30	30	0 SU	SUBMIT ROOF & SHEET MET SHOP DRAW . WINGS	2JUL94	31JUL94	8OCT94	6NOV94	98
.. 50*	15	15	0 SU	GOVERNMENT APPROVE ROOF & SHEE	1AUG94	15AUG94	7NOV94	21NOV94	98

Figure 5-9 Cont.

REPORT DATE 10JUN94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 3

ACTIVITY ID	ORIG REN OUR OUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 10	30 30	0	SUBMIT X-RAY PROTECTION	2JUL94	31JUL94	23OCT94	21NOV94	113
.. 31*	20 20	0 SU	GOVERNMENT APPROVE X-RAY PROTE	1AUG94	20AUG94	22NOV94	11DEC94	113
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 19	43 43	0	SUBMIT & APPROVE DOOR CANOPIES	2JUL94	15AUG94	26MAR95	9MAY95	267
.. 52*	73 73	0 SU	DELIVER DOOR CANOPIES & SIGNS	16AUG94	29OCT94	10MAY95	23JUL95	267
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 20	30 30	0	SUBMIT PAINT SAMPLES	2JUL94	31JUL94	19JAN95	17FEB95	201
.. 53*	30 30	0 SU	GOVERNMENT TEST & APPROVE PAINT	1AUG94	30AUG94	18FEB95	19MAR95	201
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 21	30 30	0	SUBMIT VINYL WALL COVERING	2JUL94	31JUL94	22MAR95	20APR95	263
.. 54*	30 30	0 SU	GOVERNMENT APPROVE COLOR SWP.	1AUG94	30AUG94	21APR95	20MAY95	263
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 22	30 30	0	SUBMIT SHOP DRAWINGS MILLWORK	2JUL94	31JUL94	25DEC94	23JAN95	176
.. 55*	20 20	0 SU	GOVERNMENT APPROVE MILLWORK	1AUG94	20AUG94	24JAN95	12FEB95	176
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 23	30 30	0	SUBMIT RESILIENT FLOOR SAMPLES	2JUL94	31JUL94	25FEB95	24MAR95	236
.. 56*	30 30	0 SU	GOVERNMENT APPROVE & COLOR SEL	1AUG94	30AUG94	25MAR95	23APR95	236
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 24	43 43	0	SUBMIT SHOP DRAWINGS CASEWORK	2JUL94	15AUG94	27NOV94	10JAN95	148
.. 57*	30 30	0 SU	GOVERNMENT APPROVE CASEWORK	1AUG94	14SEP94	11JAN95	9FEB95	148
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 25	43 43	0	SUBMIT HOSPITAL & MISC. EQUIPMENT	2JUL94	15AUG94	17OCT94	30NOV94	107
.. 58*	30 30	0 SU	GOVERNMENT APPROVE HOSPITAL &	1AUG94	14SEP94	10DEC94	30DEC94	107
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 26	30 30	0	SUBMIT MISC. BUILDING EQUIPMENT	2JUL94	31JUL94	2MAY95	31MAY95	243
.. 59*	20 20	0 SU	GOVERNMENT APPROVE MISC. BUILD	1AUG94	20AUG94	1APR95	20APR95	243
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 27	15 15	0	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AUG94	20AUG94	35
.. 65	16 16	0 SU	FOOTINGS & PLINTHS	21AUG94	5SEP94	21AUG94	5SEP94	0
.. 87	14 14	0 SU	BASEMENT FOUNDATION SLABS & BEAMS	26AUG94	8SEP94	27AUG94	9SEP94	1
.. 160	60 60	0 SU	DELIVER & INSTALL STORM DRAINA	21AUG94	19OCT94	3MAY95	1MAY95	194
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 28	30 30	0	PRE-QUALIFY WELDERS	2JUL94	31JUL94	30NOV94	29DEC94	151
.. 102	10 10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	8JAN95	30DEC94	8JAN95	0
.. 1*	1 1	0 PR	NOTICE TO PROCEED	1JUL94	1JUL94	1JUL94	1JUL94	0
.. 29	43 43	0	SUBMIT & APPROVE SHP DRWS OS E	2JUL94	15AUG94	3NOV94	17DEC94	124

Figure 5-9 Cont.

Construction Company

PRIMAVERA PROJECT PL.

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 16NOV96 RUN NO. 50

7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL96 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL96 PAGE NO. 4

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 157*	45	45	0 SU	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	16AUG96	29SEP96	18DEC96	31JAN97	124
.. 2*	7	7	0 PR	MOBILIZE & LAYOUT	2JUL96	8JUL96	27JUL96	2AUG96	25
.. 30	14	14	0	ROUGH GRADE & EXCAVATE BUILDIN	9JUL96	22JUL96	3AUG96	16AUG96	25
.. 62	10	10	0 SU	ROUGH IN UNDER BASEMENT	16AUG96	25AUG96	17AUG96	26AUG96	1
.. 85	16	16	0 SU	FOOTINGS & PLINTHS	21AUG96	3SEP96	21AUG96	5SEP96	0
.. 2*	7	7	0 PR	MOBILIZE & LAYOUT	2JUL96	8JUL96	27JUL96	2AUG96	25
.. 31	32	32	0	DEMOLITION & SITE GRADING	9JUL96	9AUG96	31DEC96	31JAN97	175
.. 160	60	60	0 SU	DELIVER & INSTALL STORM DRAINA	21AUG96	19OCT96	3MAY97	1MAY97	196
.. 161	45	45	0 SU	OUTSIDE PLUMBING	30SEP96	13NOV96	18MAY95	1MAY95	169
.. 162	90	90	0 SU	OUTSIDE ELECTRICAL	30SEP96	20DEC96	1FEB97	1MAY95	124
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL96	1JUL96	1JUL96	1JUL96	0
.. 32	45	45	0	SUBMIT & APPROVE MASONRY MATER	2JUL96	15AUG96	25OCT96	8DEC96	113
.. 38*	45	45	0 SU	DELIVER MASONRY MATERIALS	16AUG96	29SEP96	9DEC96	22JAN97	113
.. 1*	1	1	0 PR	NOTICE TO PROCEED	1JUL96	1JUL96	1JUL96	1JUL96	0
.. 33	30	30	0	SUBMIT SHOP DRAWINGS METAL WINDOWS	2JUL96	31JUL96	10SEP96	9OCT96	70
.. 39*	20	20	0 SU	GOVERNMENT APPROVE METAL WINDO	1AUG96	20AUG96	10OCT96	29OCT96	70
.. 3*	30	30	0 PR	SUBMIT & APPROVE MECH/ELEC R.I.	2JUL96	31JUL96	3JUL96	1AUG96	1
.. 34	15	15	0	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AUG96	15AUG96	2AU96	16AU96	1
.. 62*	10	10	0 SU	ROUGH IN UNDER BASEMENT	16AUG96	25AUG96	17AU96	26AU96	1
.. 4*	20	20	0 PR	SUBMIT SHOP DRAWINGS PAN FORMS	2JUL96	21JUL96	17AU96	5SEP96	46
.. 35	15	15	0	GOVERNMENT APPROVE PAN FORMS	22JUL96	5AUG96	6SEP96	20SEP96	46
.. 63*	45	45	0 SU	DELIVER PAN FORMS	6AUG96	19SEP96	21SEP96	4NOV96	46
.. 5*	20	20	0 PR	SUBMIT SHOP DRAWINGS METAL DOORS	2JUL96	21JUL96	22AU96	10SEP96	51
.. 36	15	15	0	GOVERNMENT APPROVE METAL DOOR	22JUL96	5AUG96	11SEP96	25SEP96	51
.. 64*	90	90	0 SU	FABRICATE & DELIVER METAL DOORS	6AUG96	3NOV96	26SEP96	24DEC96	51
.. 6*	30	30	0 PR	SUBMIT SHOP DRAWINGS STRUCT. STEL. & JOISTS	2JUL96	31JUL96	12AU96	10SEP96	41
.. 37	20	20	0	GOVERNMENT APPROVE STRUCT. STE	1AUG96	20AUG96	11SEP96	3OCT96	41
.. 65*	45	45	0 SU	FABRICATE & DELIVER STEEL COLUMNS	21AUG96	4OCT96	10NOV96	24DEC96	81
.. 66*	90	90	0 SU	FABRICATE & DELIVER STRUCT. STEEL	21AUG96	18NOV96	1OCT96	29DEC96	41
.. 32*	45	45	0 PR	SUBMIT & APPROVE MASONRY MATER	2JUL96	15AUG96	25OCT96	8DEC96	115
.. 38	45	45	0	DELIVER MASONRY MATERIALS	16AUG96	29SEP96	9DEC96	22JAN97	113
.. 67*	2	2	0 SU	SAMPLE MASONRY PANEL	30SEP96	1OCT96	23JAN97	24JAN97	115
.. 33*	30	30	0 PR	SUBMIT SHOP DRAWINGS METAL WINDOWS	2JUL96	31JUL96	10SEP96	9OCT96	70
.. 39	20	20	0	GOVERNMENT APPROVE METAL WINDO	1AUG96	20AUG96	10OCT96	29OCT96	70
.. 68*	90	90	0 SU	FABRICATE & DELIVER METAL WINDOWS	21AUG96	18NOV96	3OCT96	27JAN97	70
.. 7*	30	30	0 PR	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	2JUL96	31JUL96	12SEP96	11OCT96	72
.. 40	30	30	0	GOVERNMENT APPROVE BUILDER'S H	1AUG96	30AUG96	12OCT96	10NOV96	72

Figure 5-9 Cont.

REPORT DATE 16NOV94 RUN NO. 50
7:46

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 3

31 Oct 97

ACTIVITY ID	ORIG REN DUR	REN DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 69*	120	120	0 SU	DELIVER BUILDER'S HARDWARE	31AUG94	20DEC94	11NOV94	10MAR95	72
.. 80*	45	45	0 PR	SUBMIT SHOP DRUGS, ALUM. ENTRÁ	2JUL94	15AUG94	20CT94	20NOV94	97
.. 41	20	20	0	GOVERNMENT APP. ALUM. ENTRANCE	16AUG94	6SEP94	21NOV94	10DEC94	97
.. 70*	90	90	0 SU	FABRICATE & DELIVER ALUM. ENTRANCE	5SEP94	3OEC94	11DEC94	10MAR95	97
.. 9*	45	45	0 PR	SUBMIT LATH & PLASTER	2JUL94	15AUG94	25OEC94	7FEB95	176
.. 42	15	15	0	GOVERNMENT APPROVE LATH & PLAS	16AUG94	3OAU94	8FEB95	22FEB95	176
.. 71*	30	30	0 SU	DELIVER LATH & PLASTER MATERIALS	31AUG94	29SEP94	23FEB95	24MAR95	176
.. 10*	45	45	0 PR	SUBMIT CERAMIC TILE	2JUL94	15AUG94	13DEC94	26JAN95	164
.. 43	30	30	0	GOVERNMENT APPROVE CERAMIC TIL	16AUG94	14SEP94	27JAN95	25FEB95	164
.. 72*	45	45	0 SU	DELIVER CERAMIC TILE MATERIAL	15SEP94	29OCT94	26FEB95	11APR95	164
.. 11*	45	45	0 PR	SUBMIT TOILET PARTITIONS & ACC	2JUL94	15AUG94	12FEB95	28MAR95	223
.. 44	20	20	0	GOVERNMENT APPROVE TOILET PART	16AUG94	4SEP94	27MAR95	17APR95	223
.. 73*	90	90	0 SU	DELIVER TOILET PARTITIONS & ACCESSORIES	5SEP94	3OEC94	18APR95	16JUL95	223
.. 12*	30	30	0 PR	SUBMIT PLUMBING FIXTURES & MEC	2JUL94	31JUL94	20OCT94	18NOV94	110
.. 45	30	30	0	GOVT. APPROVE PLUMB. FIXTURES	1AUG94	30AUG94	19NOV94	18DEC94	110
.. 74*	150	150	0 SU	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	31AUG94	27JAN95	19DEC94	17MAY95	110
.. 13*	30	30	0 PR	SUBMIT ELECTRIC FIXTURES & EQUIP.	2JUL94	31JUL94	17OCT94	15JAN95	168
.. 46	30	30	0	GOVERNMENT APPROVE ELEC. FIXTU	1AUG94	30AUG94	16JAN95	14FEB95	168
.. 75*	120	120	0 SU	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	31AUG94	28OCT94	15FEB95	14JUN95	168
.. 14*	45	45	0 PR	SUBMIT & APPROVE SHOP DRUG. MISC. METAL	2JUL94	15AUG94	17OCT94	30NOV94	107
.. 47	45	45	0	FABRICATE & DELIVER MISC. METALS	16AUG94	29SEP94	10DEC94	14JAN95	107
.. 92	10	10	0 SU	BASEMENT STEPS & LANDINGS	6OCT94	15OCT94	15JAN95	24JAN95	101
.. 15*	35	35	0 PR	SUBMIT & APPROVE SHOP DRUG. REINF. STEEL	2JUL94	31JUL94	2JUL94	31JUL94	0
.. 48	15	15	0	DELIVER REINFORCING STEEL	6AUG94	20AUG94	6AUG94	20AUG94	0
.. 85*	16	16	0 SU	FOOTINGS & PLEIRHS	21AUG94	5SEP94	21AU94	5SEP94	0
.. 160*	60	60	0 SU	DELIVER & INSTALL STORM DRAINA	21AUG94	19OCT94	3MAY95	1MAY95	194
.. 16*	45	45	0 PR	SUBMIT & APPROVE ROOF DECK SHO	2JUL94	15AUG94	26OCT94	9DEC94	116
.. 49	30	30	0	DELIVER ROOF DECK MATERIALS	16AUG94	14SEP94	10DEC94	8JAN95	116
.. 109	12	12	0 SU	INSTALL ROOF DECK	9JAN95	20JAN95	9JAN95	20JAN95	0
.. 17*	30	30	0 PR	SUBMIT ROOF & STREET MET SHO DRAW . .WING	2JUL94	31JUL94	6OCT94	6NOV94	98
.. 50	15	15	0	GOVERNMENT APPROVE ROOF & SNEE	1AUG94	15AUG94	7NOV94	21NOV94	98
.. 76*	60	60	0 SU	FABRICATE & DELIVER SHEETMETAL\ROOF	16AUG94	14OCT94	22NOV94	20JAN95	98
.. 18*	30	30	0 PR	SUBMIT X-RAY PROTECTION	2JUL94	31JUL94	23OCT94	21NOV94	113
.. 51	20	20	0	GOVERNMENT APPROVE X-RAY PROTÉ	1AUG94	20AUG94	22NOV94	11DEC94	113
.. 77*	75	75	0 SU	DELIVER PROTECTION MATERIALS	21AUG94	3NOV94	12DEC94	24FEB95	113

5-26

Figure 5-9 Cont.

...sys. .1 Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 16NOV94 RUN NO. 50

7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUO95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 6

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 19*	45	45	0 PR	SUBMIT & APPROVE DOOR CANOPIES	2JUL94	15AUO94	26MAR95	9MAY95	267
.. 52	75	75	0	DELIVER DOOR CANOPIES & SIGNS	16AUO94	29OCT94	10MAY95	23JUL95	267
.. 154	10	10	0 SU	INSTALL DOOR CANOPIES & SIGNS	26JAN95	4FEB95	24JUL95	2AUG95	179
.. 20*	30	30	0 PR	SUBMIT PAINT SAMPLES	2JUL94	31JUL94	19JAN95	17FEB95	201
.. 53	30	30	0	GOVERNMENT TEST & APPROVE PAINT	1AUO94	30AUO94	18FEB95	19MAR95	201
.. 78*	45	45	0 SU	DELIVER PAINT MATERIALS	31AUO94	14OCT94	20MAY95	3MAY95	201
.. 21*	30	30	0 PR	SUBMIT VINYL WALL COVERING	2JUL94	31JUL94	22MAR95	20APR95	263
.. 54	30	30	0	GOVERNMENT APPROVE COLOR SAMPL.	1AUO94	30AUO94	21APR95	20MAY95	263
.. 79*	60	60	0 SU	DELIVER VINYL WALL COVERING	31AUO94	29OCT94	21MAY95	19JUL95	263
.. 22*	30	30	0 PR	SUBMIT SHOP DRAWINGS MILLWORK	2JUL94	31JUL94	25DEC94	23JAN95	176
.. 55	20	20	0	GOVERNMENT APPROVE MILLWORK	1AUO94	20AUO94	24JAN95	12FEB95	176
.. 80*	120	120	0 SU	FABRICATE & DELIVER MILLWORK	21AUO94	10DEC94	13FEB95	12JUN95	176
.. 23*	30	30	0 PR	SUBMIT RESILIENT FLOOR SAMPLES	2JUL94	31JUL94	23FEB95	24MAR95	236
.. 56	30	30	0	GOVERNMENT APPROVE & COLOR SEL.	1AUO94	30AUO94	25MAR95	23APR95	236
.. 81*	45	45	0 SU	DELIVER RESILIENT FLOOR MATERIALS	31AUO94	16OCT94	26APR95	7JUN95	236
.. 24*	45	45	0 PR	SUBMIT SHOP DRAWINGS CASEWORK	2JUL94	15AUO94	27NOV94	10JAN95	148
.. 57	30	30	0	GOVERNMENT APPROVE CASEWORK	16AUO94	16SEP94	11JAN95	9FEB95	148
.. 82*	150	150	0 SU	DELIVER CASEWORK	15SEP94	11FEB95	10FEB95	9JUL95	148
.. 25*	45	45	0 PR	SUBMIT HOSPITAL & MISC. EQUIPMENT	2JUL94	15AUO94	17OCT94	30NOV94	107
.. 58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	16AUO94	16SEP94	10DEC94	30DEC94	107
.. 83*	180	180	0 SU	DELIVER HOSPITAL & MISCELLANEOUS EQUIPMENT	15SEP94	13MAY95	31DEC94	28JUN95	107
.. 26*	30	30	0 PR	SUBMIT MISC. BUILDING EQUIPMENT	2JUL94	31JUL94	2MAY95	31MAR95	243
.. 59	20	20	0	GOVERNMENT APPROVE MISC. BUILD	1AUO94	20AUO94	1APR95	20APR95	243
.. 84*	90	90	0 SU	DELIVER MISC. BUILDING EQUIPMENT	21AUO94	18NOV94	21APR95	19JUL95	243
.. 30	14	14	0 PR	ROUGH GRADE & EXCAVATE BUILDIN	9JUL94	22JUL94	3AUO94	16AUO94	25
.. 34*	15	15	0 PR	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	1AUO94	15AUO94	2AUO94	16AUO94	1
.. 62	10	10	0	ROUGH IN UNDER BASEMENT	16AUO94	25AUO94	17AUO94	26AUO94	1
.. 87*	14	14	0 SU	BASEMENT FOUNDATION SLABS & BEAMS	26AUO94	8SEP94	27AUO94	9SEP94	1
.. 35*	15	15	0 PR	GOVERNMENT APPROVE PAN FORMS	22JUL94	5AUO94	6SEP94	20SEP94	46
.. 63	45	45	0	DELIVER PAN FORMS	6AUO94	19SEP94	21SEP94	4NOV94	46
.. 94	50	50	0 SU	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 95	50	50	0 SU	70% UNDERFLOOR MECH. & ELEC. R	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 36*	15	15	0 PR	GOVERNMENT APPROVE METAL DOOR	22JUL94	5AUO94	11SEP94	23SEP94	51
.. 64	90	90	0	FABRICATE & DELIVER METAL DOORS	6AUO94	3NOV94	26SEP94	24DEC94	51
.. 100	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
.. 37*	20	20	0 PR	GOVERNMENT APPROVE STRUCT. STE	1AUO94	20AUO94	11SEP94	30SEP94	41
.. 65	45	45	0	FABRICATE & DELIVER STEEL COLUMNS	21AUO94	4OCT94	10NOV94	24DEC94	41

5-27

Figure 5-9 Cont.

REPORT DATE 16NOV94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 7

31 Oct 97

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 100	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	29DEC94	29DEC94	29DEC94	0
.. 37*	20	20	0 PR	GOVERNMENT APPROVE STRUCT. STEE	1AUG94	20AUG94	11SEP94	30SEP94	41
.. 66	90	90	0	FABRICATE & DELIVER STRUCT. STEEL	21AUG94	18NOV94	10CT94	29DEC94	41
.. 102	10	10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	BJAN95	30DEC94	BJAN95	0
.. 38*	45	45	0 PR	DELIVER MASONRY MATERIALS	16AUG94	29SEP94	9OCT94	22JAN95	115
.. 67	2	2	0	SAMPLE MASONRY PANEL	30SEP94	10CT94	23JAN95	24JAN95	115
.. 103	27	27	0 SU	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	25JAN95	20FEB95	26
.. 39*	20	20	0 PR	GOVERNMENT APPROVE METAL WINDO	1AUG94	20AUG94	10OCT94	29OCT94	70
.. 68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	21AUG94	18NOV94	30OCT94	27JAN95	70
.. 111	14	14	0 SU	INSTALL METAL WINDOWS	2JAN95	15JAN95	28JAN95	10FEB95	26
.. 40*	30	30	0 PR	GOVERNMENT APPROVE BUILDER'S H	1AUG94	30AUG94	12OCT94	10NOV94	72
.. 69	120	120	0	DELIVER BUILDER'S HARDWARE	31AUG94	28DEC94	11NOV94	10MAR95	72
.. 108	14	14	0 SU	INSTALL METAL DOORS & ALUMINUM ENTRANCE	26JAN95	8FEB95	11MAR95	24MAR95	44
.. 41*	20	20	0 PR	GOVERNMENT APP. ALUM. ENTRANCE	16AUG94	4SEP94	21NOV94	10DEC94	97
.. 70	90	90	0	FABRICATE & DELIVER ALUM. ENTRANCE	5SEP94	3OCT94	11DEC94	10MAR95	97
.. 108	14	14	0 SU	INSTALL METAL DOORS & ALUMINUM ENTRANCE	26JAN95	8FEB95	11MAR95	24MAR95	44
.. 42*	15	15	0 PR	GOVERNMENT APPROVE LATH & PLAS	16AUG94	30AUG94	8FEB95	22FEB95	176
.. 71	30	30	0	DELIVER LATH & PLASTER MATERIALS	31AUG94	29SEP94	23FEB95	24MARS95	176
.. 116	14	14	0 SU	STUCCO	11FEB95	24FEB95	25MARS95	7APR95	42
.. 43*	30	30	0 PR	GOVERNMENT APPROVE CERAMIC TIL	16AUG94	14SEP94	27JAN95	25FEB95	164
.. 72	45	45	0	DELIVER CERAMIC TILE MATERIAL	15SEP94	29OCT94	26FEB95	11APR95	164
.. 122	22	22	0 SU	CERAMIC TILE	25MARS95	15APR95	12APR95	3MAY95	18
.. 44*	20	20	0 PR	GOVERNMENT APPROVE TOILET PART	16AUG94	4SEP94	29MARS95	17APR95	225
.. 73	90	90	0	DELIVER TOILET PARTITIONS & ACCESSORIES	5SEP94	3OCT94	18APR95	16JUL95	225
.. 128	17	17	0 SU	TOILET PARTITIONS & ACCESSORIES	16APR95	2MAY95	17JUL95	2AU95	92
.. 45*	30	30	0 PR	GOVT. APPROVE PLUMB. FIXTURES	1AUG94	30AUG94	19NOV94	18DEC94	110
.. 74	150	150	0	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	31AUG94	27JAN95	19DEC94	17MAY95	110
.. 133	70	70	0 SU	INSTALL MECHANICAL EQUIPMENT	4MAY95	12JUL95	18MAY95	26JUL95	14
.. 141	30	30	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	1JUN95	30JUN95	27JUN95	26JUL95	26
.. 46*	30	30	0 PR	GOVERNMENT APPROVE ELEC. FIXTU	1AUG94	30AUG94	16JAN95	16FEB95	168
.. 75	120	120	0	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	31AUG94	28DEC94	15FEB95	14JUN95	168
.. 140	42	42	0 SU	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	1JUN95	12JUL95	15JUN95	26JUL95	14
.. 50*	15	15	0 PR	GOVERNMENT APPROVE ROOF & SHEE	1AUG94	15AU94	7NOV94	21NOV94	98
.. 76	60	60	0	FABRICATE & DELIVER SHEETMETAL/WOOD	16AUG94	14OCT94	22NOV94	20JAN95	98
.. 110	21	21	0 SU	ROOFING & SHEET METAL	21JAN95	10FEB95	21JAN95	10FEB95	0

5 - 28

Figure 5-9 Cont.

J/B. Construction Company

REPORT DATE 16NOV94 RUN NO. 50

744

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95

DATA DATE 1JUL94 PAGE NO. 8

ACTIVITY ID	ORIG REN DUR	DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL
									FLOAT
.. 51*	20	20	0 PR	GOVERNMENT APPROVE X-RAY PROTE	1AU94	20AU94	22NOV94	11DEC94	113
.. 77	75	75	0	DELIVER PROTECTION MATERIALS	21AU94	3NOV94	12OCT94	24FEB95	113
.. 116	42	42	0 SU	INTERIOR PARTITIONS	11FEB95	24MAR95	25FEB95	7APR95	14
.. 93*	30	30	0 PR	GOVERNMENT TEST & APPROVE PAINT	1AU94	30AU94	16FEB95	19MAR95	201
.. 78	45	45	0	DELIVER PAINT MATERIALS	31AU94	16OCT94	20MARD5	3MAY95	201
.. 130	20	20	0 SU	30% PAINT & FINISH	6MAY95	31MAY95	6MAY95	31MAY95	0
.. 54*	30	30	0 PR	GOVERNMENT APPROVE COLOR SAMP.	1AU94	30AU94	21APR95	20MAY95	263
.. 79	60	60	0	DELIVER VINYL WALL COVERING	31AU94	29OCT94	21MAY95	19JUL95	263
.. 142	14	14	0 SU	VINYL WALL COVER	1JUN95	14JUN95	20JUL95	2AU95	49
.. 55*	20	20	0 PR	GOVERNMENT APPROVE MILLWORK	1AU94	20AU94	24JAN95	12FEB95	176
.. 80	120	120	0	FABRICATE & DELIVER MILLWORK	21AU94	18DEC94	13FEB95	12JUN95	176
.. 143	16	16	0 SU	INSTALL 50% MILLWORK	1JUN95	16JUN95	13JUN95	26JUN95	12
.. 56*	30	30	0 PR	GOVERNMENT APPROVE & COLOR SEL	1AU94	30AU94	25MAR95	23APR95	236
.. 81	45	45	0	DELIVER RESILIENT FLOOR MATERIALS	31AU94	14OCT94	24APR95	7JUN95	236
.. 144	21	21	0 SU	INSTALL RESILIENT FLOORS	1JUN95	21JUN95	8JUN95	28JUN95	7
.. 57*	30	30	0 PR	GOVERNMENT APPROVE CASEWORK	1AU94	14SEP94	11JAN95	9FEB95	146
.. 82	150	150	0	DELIVER CASEWORK	15SEP94	11FEB95	10FEB95	9JUL95	146
.. 151	24	24	0 SU	INSTALL CASEWORK	22JUN95	19JUL95	10JUL95	2AU95	18
.. 58*	30	30	0 PR	GOVERNMENT APPROVE HOSPITAL &	1AU94	14SEP94	1DEC94	30DEC94	107
.. 83	180	180	0	DELIVER HOSPITAL & MISCELLANEOUS EQUIPMENT	15SEP94	13MAR95	31DEC94	28JUN95	107
.. 152	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN95	26JUL95	29JUN95	2AU95	7
.. 59*	20	20	0 PR	GOVERNMENT APPROVE MISC. BUILD	1AU94	20AUG94	1APR95	20APR95	243
.. 84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	21AU94	18NOV94	21APR95	19JUL95	243
.. 153	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	22JUN95	5JUL95	20JUL95	2AU95	28
.. 27	15	15	0 PR	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AU94	20AUG94	35
.. 30	14	14	0 PR	ROUGH GRADE & EXCAVATE BUILDIN	9JUL94	22JUL94	3AU94	16AUG94	25
.. 48*	13	13	0 PR	DELIVER REINFORCING STEEL	6AU94	20AUG94	6AU94	20AUG94	0
.. 85	16	16	0	FOOTINGS & PLINTHS	21AU94	5SEP94	21AU94	5SEP94	0
.. 86*	30	30	0 SU	GRADEBEAMS	6SEP94	3OCT94	6SEP94	3OCT94	0
.. 85*	16	16	0 PR	FOOTINGS & PLINTHS	21AU94	5SEP94	21AUG94	5SEP94	0
.. 86	30	30	0	GRADEBEAMS	6SEP94	3OCT94	6SEP94	3OCT94	0
.. 91*	10	10	0 SU	BACKFILL & GRADE UNDER BUILDING	6OCT94	15OCT94	6OCT94	15OCT94	0
.. 92*	10	10	0 SU	BASEMENT STEPS & LANDINGS	6OCT94	15OCT94	15JAN95	24JAN95	101
.. 27	15	15	0 PR	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AU94	20AUG94	35
.. 62*	10	10	0 PR	ROUGH IN UNDER BASEMENT	16AUG94	25AUG94	17AUG94	26AUG94	1
.. 87	14	14	0	BASEMENT FOUNDATION SLABS & BEAMS	26AUG94	8SEP94	27AUG94	9SEP94	1
.. 88*	21	21	0 SU	BASEMENT WALLS	9SEP94	29SEP94	10SEP94	30SEP94	1

Figure 5-9 Cont.

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 87*	16	16	0 PR	BASEMENT FOUNDATION SLABS & BEAMS	26AUG94	6SEP94	27AUG94	9SEP94	1
.. 88	21	21	0	BASEMENT WALLS	9SEP94	29SEP94	10SEP94	30SEP94	1
.. 89*	5	5	0 SU	DAMPROOFING	30SEP94	4OCT94	1OCT94	3OCT94	1
.. 88*	21	21	0 PR	BASEMENT WALLS	9SEP94	29SEP94	10SEP94	30SEP94	1
.. 89	5	5	0	DAMPROOFING	30SEP94	4OCT94	1OCT94	3OCT94	1
.. 91	10	10	0 SU	BACKFILL & GRADE UNDER BUILDING	6OCT94	15OCT94	6OCT94	15OCT94	0
.. 92	10	10	0 SU	BASEMENT STEPS & LANDINGS	6OCT94	15OCT94	15JAN95	24JAN95	101
.. 86*	30	30	0 PR	GRADEBEAMS	6SEP94	3OCT94	6SEP94	3OCT94	0
.. 89	5	5	0 PR	DAMPROOFING	30SEP94	4OCT94	1OCT94	3OCT94	1
.. 91	10	10	0	BACKFILL & GRADE UNDER BUILDING	6OCT94	15OCT94	6OCT94	15OCT94	0
.. 93*	20	20	0 SU	30X UNDERFLOOR MECH. & ELEC. R	16OCT94	4NOV94	16OCT94	4NOV94	0
.. 47	45	45	0 PR	FABRICATE & DELIVER MISC. METALS	16AUG94	29SEP94	1OCT94	14JAN95	107
.. 86*	30	30	0 PR	GRADEBEAMS	6SEP94	3OCT94	6SEP94	3OCT94	0
.. 89	5	5	0 PR	DAMPROOFING	30SEP94	4OCT94	1OCT94	3OCT94	1
.. 92	10	10	0	BASEMENT STEPS & LANDINGS	6OCT94	15OCT94	15JAN95	24JAN95	101
.. 103	27	27	0 SU	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	25JAN95	20FEB95	26
.. 91*	10	10	0 PR	BACKFILL & GRADE UNDER BUILDING	6OCT94	15OCT94	6OCT94	15OCT94	0
.. 93	20	20	0	30X UNDERFLOOR MECH. & ELEC. R	16OCT94	4NOV94	16OCT94	4NOV94	0
.. 94*	50	50	0 SU	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 95*	50	50	0 SU	70X UNDERFLOOR MECH. & ELEC. R	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 63	45	45	0 PR	DELIVER PAN FORMS	6AUG94	19SEP94	21SEP94	4NOV94	46
.. 93*	20	20	0 PR	30X UNDERFLOOR MECH. & ELEC. R	16OCT94	4NOV94	16OCT94	4NOV94	0
.. 94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 97*	18	18	0 SU	CONCRETE TOPPING FILL	25DEC94	11JAN95	7FE95	24FEB95	44
.. 98*	63	63	0 SU	ELECTRICAL ROUGH IN	25DEC94	25FEB95	4FEB95	7APR95	41
.. 99*	70	70	0 SU	MECHANICAL & PLUMBING ROUGH IN	25DEC94	4MAR95	28JAN95	7APR95	34
.. 100*	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
.. 63	45	45	0 PR	DELIVER PAN FORMS	6AUG94	19SEP94	21SEP94	4NOV94	46
.. 93*	20	20	0 PR	30X UNDERFLOOR MECH. & ELEC. R	16OCT94	4NOV94	16OCT94	4NOV94	0
.. 95	50	50	0	70X UNDERFLOOR MECH. & ELEC. R	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 100*	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
.. 96*	50	50	0 PR	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 97	18	18	0	CONCRETE TOPPING FILL	25DEC94	11JAN95	7FE95	24FEB95	44
.. 114	42	42	0 SU	INTERIOR PARTITIONS	11FEB95	24MAR95	25FEB95	7APR95	14
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 98	63	63	0	ELECTRICAL ROUGH IN	25DEC94	25FEB95	4FEB95	7APR95	41
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	8APR95	21APR95	8APR95	21APR95	0
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	24DEC94	5NOV94	24DEC94	0
.. 99	70	70	0	MECHANICAL & PLUMBING ROUGH IN	25DEC94	4MAR95	28JAN95	7APR95	34

5-30

Figure 5-9 Cont.

J.B. Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 16NOV94 RUN NO. 50

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95⁴

7:44

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 10

ACTIVITY ID	ORIG DUR	REN DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	0APR94	21APR94	0APR94	21APR94	0
.. 64	90	90	0 PR	FABRICATE & DELIVER METAL DOORS	0AUG94	3NOV94	26SEP94	24DEC94	51
.. 65	45	45	0 PR	FABRICATE & DELIVER STEEL COLUMNS	21AUG94	4OCT94	10NOV94	24DEC94	81
.. 96*	50	50	0 PR	FORM, PLACE, & CURE PAV SLABS & BEAMS	3NOV94	24DEC94	3NOV94	24DEC94	0
.. 99*	50	50	0 PR	70% UNDERFLOOR MECH. & ELEC. R	3NOV94	24DEC94	3NOV94	24DEC94	0
.. 100	5	5	0 PR	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
.. 102*	10	10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	0JAN95	30DEC94	0JAN95	0
.. 103*	27	27	0 SU	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	23JAN95	20FEB95	26
.. 28	30	30	0 PR	PRE-QUALIFY WELDERS	2JUL94	31JUL94	30NOV94	29DEC94	151
.. 66	90	90	0 PR	FABRICATE & DELIVER STRUCT. STEEL	21AUG94	18NOV94	10CT94	29DEC94	41
.. 100*	5	5	0 PR	ERECT STEEL COLUMNS & METAL DUCKS	25DEC94	29DEC94	25DEC94	29DEC94	0
.. 102	10	10	0 PR	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	0JAN95	30DEC94	0JAN95	0
.. 105*	12	12	0 SU	INSTALL ROOF DECK	0JAN95	20JAN95	9JAN95	20JAN95	0
.. 67	2	2	0 PR	SAMPLE MASONRY PANEL	30SEP94	10CT94	23JAN95	24JAN95	115
.. 92	10	10	0 PR	BASEMENT STEPS & LANDINGS	6OCT94	15OCT94	15JAN95	24JAN95	101
.. 100*	5	5	0 PR	ERECT STEEL COLUMNS & METAL DUCKS	25OCT94	29OCT94	25OCT94	29OCT94	0
.. 103	27	27	0 PR	EXTERIOR MASONRY WALLS	30OCT94	25JAN95	25JAN95	20FEB95	26
.. 106*	14	14	0 SU	INSTALL METAL DOORS & ALUMINUM ENTRANCE	26JAN95	0FEB95	11MAR95	24MAR95	44
.. 111*	14	14	0 SU	INSTALL METAL WINDOWS	2JAN95	15JAN95	28JAN95	10FEB95	26
.. 154*	10	10	0 SU	INSTALL DOOR CANOPIES & SIGNS	26JAN95	4FEB95	24JUL95	24UG95	179
.. 172	16	16	0 SU	TOPSOIL & FINE GRADING	23MAR95	7APR95	25JUL95	0AUG95	124
.. 69	120	120	0 PR	DELIVER BUILDER'S HARDWARE	31AUG94	20DEC94	11NOV94	10MAR95	72
.. 70	90	90	0 PR	FABRICATE & DELIVER ALUM. ENTRANCE	5SEP94	5DEC94	11DEC94	10MAR95	97
.. 103*	27	27	0 PR	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	25JAN95	20FEB95	26
.. 108	14	14	0 PR	INSTALL METAL DOORS & ALUMINUM ENTRANCE	26JAN95	0FEB95	11MAR95	26MAR95	64
.. 116	14	14	0 SU	STUCCO	11FEB95	24FEB95	25MAR95	7APR95	42
.. 49	30	30	0 PR	DELIVER ROOF DECK MATERIALS	16AUG94	14SEP94	10DEC94	0JAN95	116
.. 102*	10	10	0 PR	ERECT STRUCTURAL STEEL & JOISTS	30DEC94	0JAN95	30DEC94	0JAN95	0
.. 109	12	12	0 PR	INSTALL ROOF DECK	9JAN95	20JAN95	9JAN95	20JAN95	0
.. 110	21	21	0 PR	ROOFING & SHEET METAL	21JAN95	10FEB95	21JAN95	10FEB95	0
.. 113*	56	56	0 SU	AIRCONDITIONING DUCTWORK	11FEB95	7APR95	11FEB95	7APR95	0
.. 114*	42	42	0 SU	INTERIOR PARTITIONS	11FEB95	24MAR95	25FEB95	7APR95	14
.. 116*	14	14	0 SU	STUCCO	11FEB95	24FEB95	25MAR95	7APR95	42
.. 68	90	90	0 PR	FABRICATE & DELIVER METAL WINDOWS	21AUG94	18NOV94	30OCT94	27JAN95	70
.. 103*	27	27	0 PR	3 EXTERIOR MASONRY WALLS	30DEC94	25JAN95	25JAN95	20FEB95	26
.. 111	14	14	0 PR	INSTALL METAL WINDOWS	2JAN95	15JAN95	28JAN95	10FEB95	26
.. 113	56	56	0 SU	AIRCONDITIONING DUCTWORK	11FEB95	7APR95	11FEB95	7APR95	0

Figure 5-9 Cont.

REPORT DATE 16NOV94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JULY94 FIN DATE 14AUG95

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 11

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 110*	21	21	0 PR	ROOFING & SHEET METAL	21JAN93	10FEB93	21JAN93	10FEB93	0
.. 111	14	14	0 PR	INSTALL METAL WINDOWS	2JAN93	15JAN93	20JAN93	10FEB93	26
.. 113	56	56	0	AIRCONDITIONING DUCTWORK	11FEB93	7APR93	11FEB93	7APR93	0
.. 120*	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	BAPR93	21APR93	BAPR93	21APR93	0
.. 77	73	73	0 PR	DELIVER PROTECTION MATERIALS	21AUG94	3NOV94	12DEC94	24FEB95	113
.. 97	18	18	0 PR	CONCRETE TOPPING FILL	29DEC94	11JAN95	7FEB95	26FEB95	44
.. 110*	21	21	0 PR	ROOFING & SHEET METAL	21JAN93	10FEB93	21JAN93	10FEB93	0
.. 114	42	42	0	INTERIOR PARTITIONS	11FEB93	24MAR93	25FEB93	7APR93	14
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	BAPR93	21APR93	BAPR93	21APR93	0
.. 121*	14	14	0 SU	PLASTER WALLS	25MAR93	7APR93	20APR93	3MAY93	26
.. 122*	22	22	0 SU	CERAMIC TILE	25MAR93	15APR93	12APR93	3MAY93	18
.. 71	30	30	0 PR	DELIVER LATH & PLASTER MATERIALS	31AUG94	29SEP94	23FEB95	26MAR95	176
.. 108	14	14	0 PR	INSTALL METAL DOORS & ALUMINUM ENTRANCE	26JAN95	8FEB95	11MAY95	24MAY95	44
.. 110*	21	21	0 PR	ROOFING & SHEET METAL	21JAN93	10FEB93	21JAN93	10FEB93	0
.. 116	14	14	0	STUCCO	11FEB93	24FEB93	25MAY93	7APR93	42
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	BAPR93	21APR93	BAPR93	21APR93	0
.. 121	14	14	0 SU	PLASTER WALLS	25MAR93	7APR93	20APR93	3MAY93	26
.. 122	22	22	0 SU	CERAMIC TILE	25MAR93	15APR93	12APR93	3MAY93	18
.. 98	63	63	0 PR	ELECTRICAL ROUGH IN	25DEC94	25FEB95	4FEB95	7APR93	41
.. 99	70	70	0 PR	MECHANICAL & PLUMBING ROUGH IN	25DEC94	4MAR95	28JAN95	7APR93	34
.. 113*	56	56	0 PR	AIRCONDITIONING DUCTWORK	11FEB93	7APR93	11FEB93	7APR93	0
.. 114	42	42	0 PR	INTERIOR PARTITIONS	11FEB93	24MAR93	25FEB93	7APR93	14
.. 116	14	14	0	STUCCO	11FEB93	24FEB93	25MAY93	7APR93	42
.. 120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	BAPR93	21APR93	BAPR93	21APR93	0
.. 124*	33	33	0 SU	ACOUSTIC & OTHER CEILINGS	22APR93	26MAY93	27APR93	3MAY93	5
.. 125*	12	12	0 SU	PLASTER CEILINGS	22APR93	3MAY93	22APR93	3MAY93	0
.. 114*	42	42	0 PR	INTERIOR PARTITIONS	11FEB93	24MAR93	25FEB93	7APR93	14
.. 116	14	14	0 PR	STUCCO	11FEB93	24FEB93	25MAY93	7APR93	42
.. 121	14	14	0	PLASTER WALLS	25MAR93	7APR93	20APR93	3MAY93	26
.. 128	17	17	0 SU	TOILET PARTITIONS & ACCESSORIES	16APR93	2MAY93	17JUL93	2AUG93	92
.. 130	20	20	0 SU	30X PAINT & FINISH	4MAY93	31MAY93	4MAY93	31MAY93	0
.. 72	43	43	0 PR	DELIVER CERAMIC TILE MATERIAL	15SEP94	29OCT94	26FEB95	11APR93	164
.. 114*	42	42	0 PR	INTERIOR PARTITIONS	11FEB93	24MAR93	25FEB93	7APR93	14
.. 116	14	14	0 PR	STUCCO	11FEB93	24FEB93	25MAY93	7APR93	42
.. 122	22	22	0	CERAMIC TILE	25MAR93	15APR93	12APR93	3MAY93	18
.. 120*	17	17	0 SU	TOILET PARTITIONS & ACCESSORIES	16APR93	2MAY93	17JUL93	2AUG93	92
.. 130	20	20	0 SU	30X PAINT & FINISH	4MAY93	31MAY93	4MAY93	31MAY93	0
.. 120*	14	14	0 PR	CEILING SUSPENSION SYSTEM & INSULATION	BAPR93	21APR93	BAPR93	21APR93	0
.. 124	33	33	0	ACOUSTIC & OTHER CEILINGS	22APR93	26MAY93	27APR93	3MAY93	5
.. 139	45	45	0 SU	50X COMPLETE PAINT & FINISH	1JUN95	15JUL95	1JUN95	15JUL95	0
.. 141	30	30	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	1JUN95	30JUN95	27JUN95	26JUL95	26
.. 142	14	14	0 SU	VINYL WALL COVER	1JUN95	14JUN95	20JUL95	2AUG93	49

Figure 5-9 Cont.

/8 Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 16NOV94 RUN NO. 50
7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 12

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 120*	14	14	0 PR	CEILING SUSPENSION SYSTEM & INSULATION	2APR95	21APR95	2APR95	21APR95	0
.. 125	12	12	0	PLASTER CEILINGS	22APR95	3MAY95	22APR95	3MAY95	0
.. 130*	28	28	0 SU	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 133*	70	70	0 SU	INSTALL MECHANICAL EQUIPMENT	4MAY95	12JUL95	18MAY95	26JUL95	14
.. 73	90	90	0 PR	DELIVER TOILET PARTITIONS & ACCESSORIES	30EP94	30DEC94	18APR95	16JUL95	223
.. 121	14	14	0 PR	PLASTER WALLS	25MAR95	7APR95	20APR95	3MAY95	26
.. 122*	22	22	0 PR	CERAMIC TILE	25MAR95	15APR95	12APR95	3MAY95	10
.. 128	17	17	0	TOILET PARTITIONS & ACCESSORIES	16APR95	2MAY95	17JUL95	2AU95	92
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU95	9AU95	3AU95	9AU95	0
.. 70	45	45	0 PR	DELIVER PAINT MATERIALS	31AU95	14OCT95	20MAY95	3MAY95	201
.. 121	14	14	0 PR	PLASTER WALLS	25MAR95	7APR95	20APR95	3MAY95	26
.. 122	22	22	0 PR	CERAMIC TILE	25MAR95	15APR95	12APR95	3MAY95	10
.. 125*	12	12	0 PR	PLASTER CEILINGS	22APR95	3MAY95	22APR95	3MAY95	0
.. 130	28	28	0	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 139*	45	45	0 SU	30% COMPLETE PAINT & FINISH	1JUN95	15JUL95	1JUN95	15JUL95	0
.. 140*	42	42	0 SU	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	1JUN95	12JUL95	15JUN95	26JUL95	14
.. 141*	30	30	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	1JUN95	30JUN95	27JUN95	26JUL95	26
.. 142*	14	14	0 SU	VINYL WALL COVER	1JUN95	14JUN95	20JUL95	2AU95	49
.. 143*	16	16	0 SU	INSTALL 30% MILLWORK	1JUN95	16JUN95	13JUN95	28JUN95	12
.. 144*	21	21	0 SU	INSTALL RESILIENT FLOORS	1JUN95	21JUN95	8JUN95	28JUN95	7
.. 74	150	150	0 PR	DELIVER PLUMB. FIXTURES & MECN. EQUIP.	31AU95	27JAN95	19DEC94	17MAY95	110
.. 125*	12	12	0 PR	PLASTER CEILINGS	22APR95	3MAY95	22APR95	3MAY95	0
.. 133*	70	70	0	INSTALL MECHANICAL EQUIPMENT	4MAY95	12JUL95	18MAY95	26JUL95	14
.. 173*	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AU95	14
.. 124	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	22APR95	26MAY95	27APR95	31MAY95	5
.. 130*	28	28	0 PR	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 139	45	45	0	30% COMPLETE PAINT & FINISH	1JUN95	15JUL95	1JUN95	15JUL95	0
.. 195*	18	18	0 SU	20% PAINT & FINISH	16JUL95	2AU95	16JUL95	2AU95	0
.. 75	120	120	0 PR	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	31AU95	28DEC94	15FEB95	14JUN95	168
.. 130*	28	28	0 PR	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	1JUN95	12JUL95	15JUN95	26JUL95	14
.. 173*	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AU95	14
.. 74	150	150	0 PR	DELIVER PLUMB. FIXTURES & MECN. EQUIP.	31AU95	27JAN95	19DEC94	17MAY95	110
.. 124	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	22APR95	26MAY95	27APR95	31MAY95	5
.. 130*	28	28	0 PR	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT	1JUN95	30JUN95	27JUN95	26JUL95	26
.. 173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AU95	14
.. 79	60	60	0 PR	DELIVER VINYL WALL COVERING	31AU95	29OCT94	21MAY95	19JUL95	263
.. 124	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	22APR95	26MAY95	27APR95	31MAY95	5
.. 130*	28	28	0 PR	30% PAINT & FINISH	4MAY95	31MAY95	4MAY95	31MAY95	0
.. 142	14	14	0	VINYL WALL COVER	1JUN95	14JUN95	20JUL95	2AU95	49

Figure 5-9 Cont.

ACTIVITY ID	ORIG REN DUR	REN DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU693	9AU693	3AU693	9AU693	0
.. 80	120	120	0 PR	FABRICATE & DELIVER MILLWORK	21AU694	16DEC94	13FEB95	12JUN95	176
.. 130 ^a	20	20	0 PR	30X PAINT & FINISH	4MAY93	31MAY93	4MAY93	31MAY93	0
.. 143	16	16	0	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 146 ^a	16	16	0 SU	COMPLETE MILLWORK	17JUN93	2JUL93	30JUN93	15JUL93	13
.. 150	3	3	0 SU	GOVERNMENT TEST X-RAY PROTECTION	22JUN93	24JUN93	31JUL93	2AU693	39
.. 151	24	24	0 SU	INSTALL CASEWORK	22JUN93	15JUL93	10JUL93	2AU693	18
.. 152	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN93	26JUL93	29JUN93	2AU693	7
.. 153	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	22JUN93	5JUL93	20JUL93	2AU693	28
.. 81	45	45	0 PR	DELIVER RESILIENT FLOOR MATERIALS	31AU694	14OCT94	24APR95	7JUN95	236
.. 130 ^a	20	20	0 PR	30X PAINT & FINISH	4MAY93	31MAY93	4MAY93	31MAY93	0
.. 144	21	21	0	INSTALL RESILIENT FLOORS	1JUN93	21JUN93	8JUN93	28JUN93	7
.. 150 ^a	3	3	0 SU	GOVERNMENT TEST X-RAY PROTECTION	22JUN93	24JUN93	31JUL93	2AU693	39
.. 151 ^a	24	24	0 SU	INSTALL CASEWORK	22JUN93	15JUL93	10JUL93	2AU693	18
.. 152 ^a	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN93	26JUL93	29JUN93	2AU693	7
.. 153 ^a	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	22JUN93	5JUL93	20JUL93	2AU693	28
.. 143 ^a	16	16	0 PR	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 146	16	16	0	COMPLETE MILLWORK	17JUN93	2JUL93	30JUN93	15JUL93	13
.. 155	18	18	0 SU	20X PAINT & FINISH	16JUL93	2AU693	16JUL93	2AU693	0
.. 143	16	16	0 PR	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 144 ^a	21	21	0 PR	INSTALL RESILIENT FLOORS	1JUN93	21JUN93	8JUN93	28JUN93	7
.. 150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION	22JUN93	24JUN93	31JUL93	2AU693	39
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU693	9AU693	3AU693	9AU693	0
.. 82	150	150	0 PR	DELIVER CASEWORK	13SEP94	11FEB95	10FEB95	9JUL95	148
.. 143	16	16	0 PR	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 146 ^a	21	21	0 PR	INSTALL RESILIENT FLOORS	1JUN93	21JUN93	8JUN93	28JUN93	7
.. 151	24	24	0	INSTALL CASEWORK	22JUN93	15JUL93	10JUL93	2AU693	18
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU693	9AU693	3AU693	9AU693	0
.. 83	180	180	0 PR	DELIVER HOSPITAL & MISCELLANEOUS EQUIPMENT	15SEP94	13MAR95	31DEC94	28JUN95	107
.. 143	16	16	0 PR	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 144 ^a	21	21	0 PR	INSTALL RESILIENT FLOORS	1JUN93	21JUN93	8JUN93	28JUN93	7
.. 152	35	35	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN93	26JUL93	29JUN93	2AU693	7
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU693	9AU693	3AU693	9AU693	0
.. 84	90	90	0 PR	DELIVER HISC. BUILDING EQUIPMENT	21AU694	18NOV94	21APR95	19JUL95	243
.. 143	16	16	0 PR	INSTALL 30X MILLWORK	1JUN93	16JUN93	13JUN93	28JUN93	12
.. 144 ^a	21	21	0 PR	INSTALL RESILIENT FLOORS	1JUN93	21JUN93	8JUN93	28JUN93	7
.. 153	14	14	0	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	22JUN93	5JUL93	20JUL93	2AU693	28
.. 156	7	7	0 SU	CLEAN UP BUILDING	3AU693	9AU693	3AU693	9AU693	0
.. 52	75	75	0 PR	DELIVER DOOR CANOPIES & SIGNS	16AU694	29OCT94	10MAY95	23JUL95	267
.. 103 ^a	27	27	0 PR	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	25JAN95	20FEB95	26

Figure 5-9 Cont.

JBS. 11 Construction Company

REPORT DATE 16NOV94 RUN NO. 50
7:46

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG954

DATA DATE 1JUL94 PAGE NO. 14

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
154	10	10	0	INSTALL DOOR CANOPIES & SIGNS	26JAN93	4FEB93	26JUL93	2AUG93	179
156	7	7	0 SU	CLEAN UP BUILDING	3AUG93	9AUG93	3AUG93	9AUG93	0
139*	45	45	0 PR	50% COMPLETE PAINT & FINISH	1JUN93	15JUL93	1JUN93	15JUL93	0
146	16	16	0 PR	COMPLETE MILLWORK	17JUN93	2JUL93	30JUN93	15JUL93	13
155	18	18	0	20% PAINT & FINISH	16JUL93	2AUG93	16JUL93	2AUG93	0
156*	7	7	0 SU	CLEAN UP BUILDING	3AUG93	9AUG93	3AUG93	9AUG93	0
128	17	17	0 PR	TOILET PARTITIONS & ACCESSORIES	16APR93	2MAY93	17JUL93	2AUG93	92
162	16	16	0 PR	VINYL WALL COVER	1JUN93	14JUN93	20JUL93	2AUG93	49
150	3	3	0 PR	GOVERNMENT TEST X-RAY PROTECTION	22JUN93	24JUN93	31JUL93	2AUG93	39
151	24	24	0 PR	INSTALL CASEWORK	22JUN93	15JUL93	10JUL93	2AUG93	18
152	35	35	0 PR	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	22JUN93	26JUL93	29JUN93	2AUG93	7
153	14	14	0 PR	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	22JUN93	5JUL93	20JUL93	2AUG93	28
154	10	10	0 PR	INSTALL DOOR CANOPIES & SIGNS	26JAN93	4FEB93	26JUL93	2AUG93	179
155*	18	18	0 PR	20% PAINT & FINISH	16JUL93	2AUG93	16JUL93	2AUG93	0
156	7	7	0	CLEAN UP BUILDING	3AUG93	9AUG93	3AUG93	9AUG93	0
174*	5	5	0 SU	SELL JOB	10AUG93	14AUG93	10AUG93	14AUG93	0
29*	45	45	0 PR	SUMMIT & APPROVE HPP DRWGS OS E	2JUL94	15AUG94	1NOV94	1DEC94	124
157	45	45	0	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	16AUG94	29SEP94	1ODEC94	31JAN95	124
161*	45	45	0 SU	OUTSIDE PLUMBING	3OSEP94	13NOV94	10MAY95	1MAY95	169
162*	90	90	0 SU	OUTSIDE ELECTRICAL	3OSEP94	2ODEC94	1FEB95	1MAY95	124
27	15	15	0 PR	CONCRETE DESIGN MIX	2JUL94	16JUL94	6AUG94	20AUG94	35
31	32	32	0 PR	DEMOLITION & SITE GRADING	9JUL94	9AUG94	31DEC94	31JAN95	175
46*	15	15	0 PR	DELIVER REINFORCING STEEL	9AUG94	20AUG94	6AUG94	20AUG94	0
160	60	60	0	DELIVER & INSTALL STORM DRAINA	21AUG94	19OCT94	3MAY95	1MAY95	194
167	42	42	0 SU	SUBGRADE & BASE FOR PAVING	29DEC94	8FEB95	2MAY95	12JUN95	124
31	32	32	0 PR	DEMOLITION & SITE GRADING	9JUL94	9AUG94	31DEC94	31JAN95	175
157*	45	45	0 PR	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	16AUG94	29SEP94	1ODEC94	31JAN95	124
161	45	45	0	OUTSIDE PLUMBING	3OSEP94	13NOV94	10MAY95	1MAY95	169
167	42	42	0 SU	SUBGRADE & BASE FOR PAVING	29DEC94	8FEB95	2MAY95	12JUN95	124
173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AUG95	14
31	32	32	0 PR	DEMOLITION & SITE GRADING	9JUL94	9AUG94	31DEC94	31JAN95	175
157*	45	45	0 PR	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	16AUG94	29SEP94	1ODEC94	31JAN95	124
162	90	90	0	OUTSIDE ELECTRICAL	3OSEP94	2ODEC94	1FEB95	1MAY95	124
167*	42	42	0 SU	SUBGRADE & BASE FOR PAVING	29DEC94	8FEB95	2MAY95	12JUN95	124
173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AUG95	14
160	60	60	0 PR	DELIVER & INSTALL STORM DRAINA	21AUG94	19OCT94	3MAY95	1MAY95	194
161	45	45	0 PR	OUTSIDE PLUMBING	3OSEP94	13NOV94	10MAY95	1MAY95	169
162*	90	90	0 PR	OUTSIDE ELECTRICAL	3OSEP94	2ODEC94	1FEB95	1MAY95	124
167	42	42	0	SUBGRADE & BASE FOR PAVING	29DEC94	8FEB95	2MAY95	12JUN95	124
168*	21	21	0 SU	CURB & GUTTER	9FEB95	1MAY95	13JUN95	3JUL95	124

Figure 5-9 Cont.

REPORT DATE 16NOV94 RUN NO. 50

7:44

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 1JUL94 PAGE NO. 19

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 167*	42	42	0 PR	SUBGRADE & BASE FOR PAVING	29DEC94	0FEB95	2MAY95	12JUN95	124
.. 168	21	21	0	CURB & GUTTER	9FEB95	1MAR95	13JUN95	3JUL95	124
.. 169*	21	21	0 SU	SIDEWALKS	2MAR95	22MAR95	4JUL95	24JUL95	124
.. 170*	10	10	0 SU	ASPHALT PAVING	2MAR95	11MAR95	15JUL95	24JUL95	135
.. 168*	21	21	0 PR	CURB & GUTTER	9FEB95	1MAR95	13JUN95	3JUL95	124
.. 169	21	21	0	SIDEWALKS	2MAR95	22MAR95	4JUL95	24JUL95	124
.. 172*	16	16	0 SU	TOPSOIL & FINE GRADING	23MAR95	7APR95	25JUL95	9AUG95	124
.. 168*	21	21	0 PR	CURB & GUTTER	9FEB95	1MAR95	13JUN95	3JUL95	124
.. 170	10	10	0	ASPHALT PAVING	2MAR95	11MAR95	15JUL95	24JUL95	135
.. 172	16	16	0 SU	TOPSOIL & FINE GRADING	23MAR95	7APR95	25JUL95	9AUG95	124
.. 103	27	27	0 PR	EXTERIOR MASONRY WALLS	30DEC94	25JAN95	29JAN95	20FEB95	26
.. 169*	21	21	0 PR	SIDEWALKS	2MAR95	22MAR95	4JUL95	24JUL95	124
.. 170	10	10	0 PR	ASPHALT PAVING	2MAR95	11MAR95	15JUL95	24JUL95	135
.. 172	16	16	0	TOPSOIL & FINE GRADING	23MAR95	7APR95	25JUL95	9AUG95	124
.. 174	5	5	0 SU	SELL JOB	10AUG95	14AUG95	10AUG95	14AUG95	0
.. 133*	70	70	0 PR	INSTALL MECHANICAL EQUIPMENT	4MAY95	12JUL95	16MAY95	26JUL95	14
.. 160*	42	42	0 PR	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	1JUN95	12JUL95	15JUN95	26JUL95	14
.. 141	30	30	0 PR	INSTALL PLUMBING FIXTURES & EQUIPMENT	1JUN95	30JUN95	27JUN95	26JUL95	26
.. 161	45	45	0 PR	OUTSIDE PLUMBING	30SEP94	13NOV94	16MAY95	1MAY95	169
.. 162	90	90	0 PR	OUTSIDE ELECTRICAL	30SEP94	20DEC94	1FEB95	1MAY95	124
.. 173	16	16	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AUG95	14
.. 174	5	5	0 SU	SELL JOB	10AUG95	14AUG95	10AUG95	14AUG95	0
.. 156*	7	7	0 PR	CLEAN UP BUILDING	3AUG95	9AUG95	3AUG95	9AUG95	0
.. 172	16	16	0 PR	TOPSOIL & FINE GRADING	23MAR95	7APR95	25JUL95	9AUG95	124
.. 173	16	16	0 PR	TEST MECHANICAL & ELECTRICAL EQUIPMENT	13JUL95	26JUL95	27JUL95	9AUG95	14
.. 174	5	5	0	SELL JOB	10AUG95	14AUG95	10AUG95	14AUG95	0

Figure 5-9 Cont.

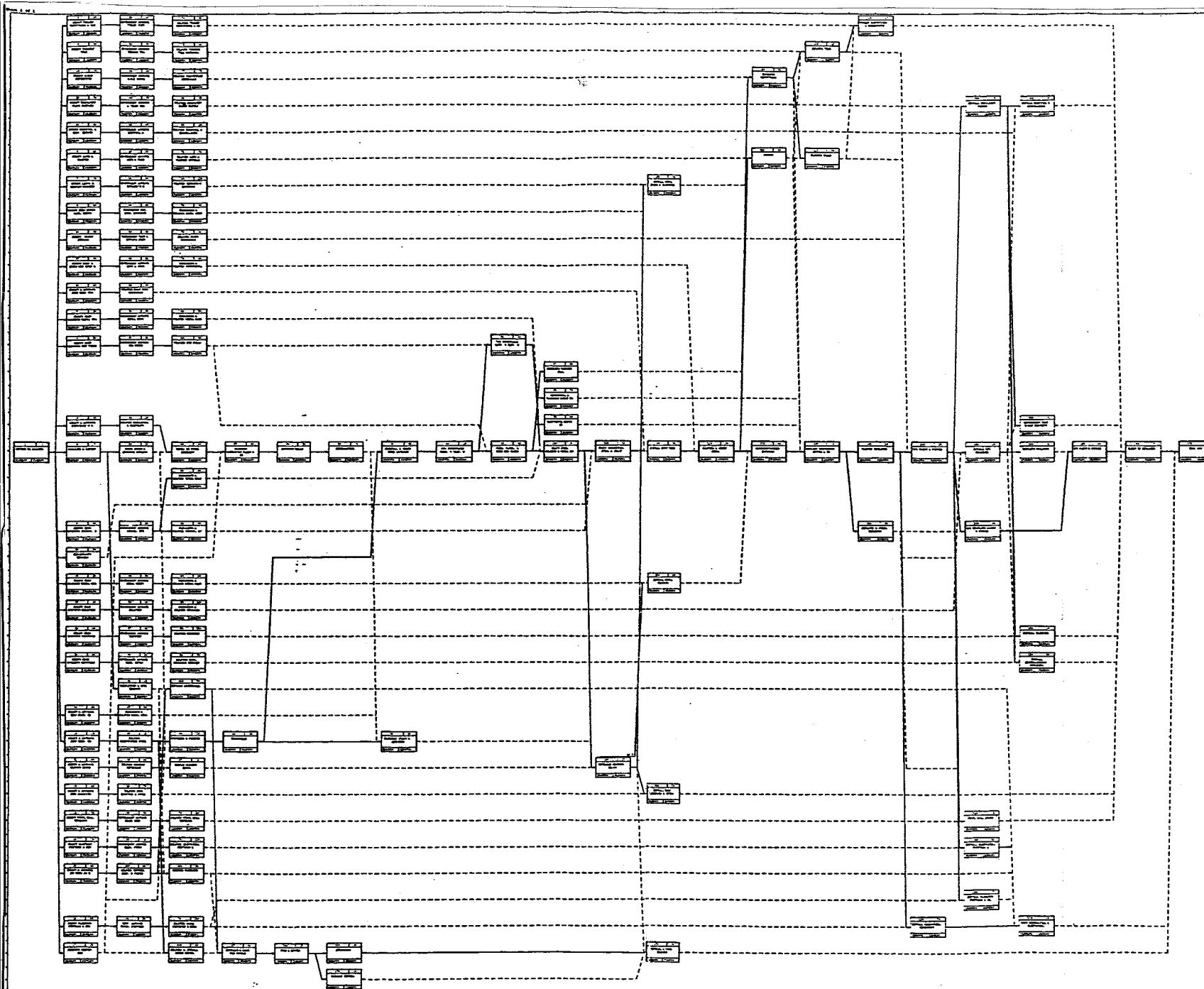


Figure 5-10

CHAPTER 6

UPDATING

Updating as the Work Progresses.

a. General. Although great benefit can result from planning a job by network analysis, even greater benefit can come from the use of NAS as the job progresses. Since the original activity time durations are only estimates, actual times involved in activity accomplishment will vary as the work progresses. This can be due to any of a number of causes which can and will arise and cannot always be foreseen. The initial plan can help get the job organized and scheduled, but as various activities actually take more or less time than originally estimated, control of the work is lost unless the network analysis is updated periodically. Updating the system is necessary to monitor progress, to evaluate impact of delays and changes, and to adjust planning so as to meet the required completion of the work. The principles of updating involve substitution of actual occurrences in lieu of previous estimates, revising the logic where necessary to reflect changes or to correct previous errors, and then making a new analysis. For example, updating activity information would include actual start and finish dates which have occurred, revised duration estimates for activities for which better information is available, and addition or deletion of activities or change of restraints occasioned by changes in the work. Updating analysis is normally done by computer. Accurate agreed upon input information is vital to a reliable update report.

b. Computer Updating. Input information for updating by computer involves accurate agreed upon information: actual start dates, actual finish dates, revised duration time estimates for appropriate activities, and logic changes if appropriate. For those activities started but not yet finished, some software programs require a percentage of completion and others a remaining duration. Most programs will use either. The particular requirements of the computer schedule software program being used should be understood before updating is undertaken. Notice that actual start and finish dates are indicated by the letter A in the Early Start or Finish column. This program indicates the update date at the beginning of each sort. In addition these printouts indicate such information as earliest and latest delivery dates of materials, dates subcontractors are needed on the job and early and late dates for Government approval actions. Computer programs differ in some respects but this program is fairly typical.

(1) Figure 6-1, is the schedule report with activity budgets. The actually completed activities with a dollar value and percentage of the value of actually started activities based on expired duration over total duration are entered in the earned column and summed to attain an earned payment of \$661,375.

(2) Figure 6-2, the early start sort indicates the activities which can start during the remainder of October, November, and December 1994. The large number of activities indicating 28 October 1994 early start (data day 120) represent activities which could have started earlier but apparently did not. This program restricts early starts to the date of the update or later unless an actual start is entered. Similarly the early finish sort, Figure 6-3 shows what can finish in the same period.

(3) Figure 6-4, the Government Responsibility Report shows the status of such activities with all but five done.

(4) Figure 6-5 is a late finish sort. These activities are those which must finish in the remainder of October, November, and December 1994. Figure 6-6, the late start sort shows activities which must start in the same period.

(5) Figure 6-7, the Mechanical/Electrical Responsibility Report, shows progress on the subcontractor's activities and the amount he or she has earned, \$210,600.

(6) Figure 6-8 is the Predecessor/Successor Report listing activities which are not yet completed. Note there are some added activities due to changes since the original schedule.

(7) Figure 6-9, the total float sort. Note as of 28 October 1994 the project completion has slipped from 14 to 21 August 1995. Note that this projection appears in the early finish column for activity 174 but that the late finish has been locked at 14 August 1995 generating a -7 float on the most critical path. If the projected completion is earlier than 14 August 1995 a positive value of critical path float would show. The negative float reveals that seven days must be regained in accomplishing activities remaining on the critical path if the completion of 14 August 1995 is to be realized. In addition, a parallel path of -4 days total float must also be regained. It is evident how easily an updated NAS reveals where and why a project is behind schedule and directs the manager's attention to what must be done to regain schedule. If the update reveal that the cause of the project being behind is excusable, the appropriate action may be to extend the contract completion date accordingly.

Oygreen Construction Company

PRIMAVERA PROJECT PLAN

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 13JAN95 RUN NO. 271
13:20
SCHEDULE REPORT WITH ACTIVITY BUDGETS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REN DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNEED	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	0	100	NOTICE TO PROCEED	.00	.00	1JUL94A	1JUL94A			
2	7	0	100	MOBILIZE & LAYOUT	10000.00	10000.00	4JUL94A	12JUL94A			
3	30	0	100	SUBMIT & APPROVE MECH/ELEC R.I.	.00	.00	5JUL94A	6AUG94A			
4	20	0	100	SUBMIT SHOP DRAWINGS PAN FORMS	.00	.00	10JUL94A	30JUL94A			
5	20	0	100	SUBMIT SHOP DRAWINGS METAL DOORS	.00	.00	21JUL94A	9AUG94A			
6	30	0	100	SUBMIT SHOP DRAWINGS STRUCT. STL. & JOISTS	.00	.00	9JUL94A	7AUG94A			
7	29	0	100	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	.00	.00	15AUG94A	18OCT94A			
8	43	0	100	SUBMIT SHOP DRUGS. ALUM. ENTR	.00	.00	2JUL94A	30JUL94A			
9	43	0	100	SUBMIT LATH & PLASTER	.00	.00	6AUG94A	18SEP94A			
10	43	0	100	SUBMIT CERAMIC TILE	.00	.00	23JUL94A	6SEP94A			
11	45	0	100	SUBMIT TOILET PARTITIONS & ACC	.00	.00	30JUL94A	8SEP94A			
12	30	0	100	SUBMIT PLUMBING FIXTURES & MEC	.00	.00	9JUL94A	7AUG94A			
13	30	0	100	SUBMIT ELECTRIC FIXTURES & EQUIP.	.00	.00	2JUL94A	28JUL94A			
14	35	0	100	SUBMIT & APPROVE SHOP DRUG. MISC. METAL	.00	.00	30JUL94A	3SEP94A			
15	35	0	100	SUBMIT & APPROVE SHOP DRUG. REINF. STEEL	.00	.00	2JUL94A	26JUL94A			
16	45	0	100	SUBMIT & APPROVE ROOF DECK SHD	.00	.00	6JUL94A	20AUG94A			
17	28	0	100	SUBMIT ROOF & SHEET MET SHD DRAW	.00	.00	11AUG94A	10SEP94A			
18	30	0	100	SUBMIT X-RAY PROTECTION	.00	.00	14AUG94A	13SEP94A			
19	39	0	100	SUBMIT & APPROVE DOOR CANOPIES	.00	.00	26JUL94A	8SEP94A			
20	25	0	100	SUBMIT PAINT SAMPLES	.00	.00	19AUG94A	18SEP94A			
21	35	0	100	SUBMIT VINYL WALL COVERING	.00	.00	4AUG94A	3SEP94A			
22	30	0	100	SUBMIT SHOP DRAWINGS MILLWORK	.00	.00	12JUL94A	11AUG94A			
23	18	0	100	SUBMIT RESILIENT FLOOR SAMPLES	.00	.00	21AUG94A	20SEP94A			
24	20	0	100	SUBMIT SHOP DRAWINGS CASEWORK	.00	.00	14AUG94A	28SEP94A			

Figure 6-1

REPORT DATE 13JAN93 RUN NO. 2/1
13:20

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT WITH ACTIVITY BUDGETS

DATA DATE 28OCT94 PAGE NO. 2

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNS	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
25	44	0	100	SUBMIT HOSPITAL & MISC. EQUIPMENT	.00	.00	26JUL94A	8SEP94A			
26	34	0	100	SUBMIT MISC. BUILDING EQUIPMENT	.00	.00	31JUL94A	3SEP94A			
27	15	0	100	CONCRETE DESIGN MIX	.00	.00	6JUL94A	21JUL94A			
28	29	20	31	PRE-QUALIFY WELDERS	.00	.00	20AUG94A	16NOV94	29DEC94	43	
29	45	0	100	SUBMIT & APPROVE SHP DRUG OS E	.00	.00	6JUL94A	21AUG94A			
30	14	0	100	ROUGH GRADE & EXCAVATE BUILDING	20000.00	20000.00	16JUL94A	30JUL94A			
31	32	0	100	DEMOLITION & SITE GRADING	50000.00	50000.00	18JUL94A	19AUG94A			
32	43	0	100	SUBMIT & APPROVE MASONRY MATERIAL	.00	.00	12JUL94A	26AUG94A			
33	32	0	100	SUBMIT SHOP DRAWINGS METAL WINDOWS	.00	.00	17AUG94A	19SEP94A			
34	15	0	100	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	65000.00	65000.00	5AUG94A	14AUG94A			
35	15	0	100	GOVERNMENT APPROVE PAN FORMS	.00	.00	4AUG94A	19AUG94A			
36	13	0	100	GOVERNMENT APPROVE METAL DOOR	.00	.00	10AUG94A	21AUG94A			
37	20	0	100	GOVERNMENT APPROVE STRUCT. STE	.00	.00	8AUG94A	25AUG94A			
38	80	16	80	DELIVER MASONRY MATERIALS	47500.00	38000.00	26AUG94A	12NOV94	22JAN95	71	
39	20	0	100	GOVERNMENT APPROVE METAL WINDOWS	.00	.00	20SEP94A	4OCT94A			
40	30	21	30	GOVERNMENT APPROVE BUILDER'S H	.00	.00	19OCT94A	17NOV94	10NOV94	-7	
41	20	0	100	GOVERNMENT APP. ALUM. ENTRANCE	.00	.00	31JUL94A	14AUG94A			
42	13	0	100	GOVERNMENT APPROVE LATH & PLAS	.00	.00	19SEP94A	3OCT94A			
43	30	0	100	GOVERNMENT APPROVE CERAMIC TIL	.00	.00	9SEP94A	3OCT94A			
44	20	0	100	GOVERNMENT APPROVE TOILET PART	.00	.00	10SEP94A	10OCT94A			
45	30	0	100	GOVT. APPROVE PLUMB. FIXTURES	.00	.00	7AUG94A	4SEP94A			
46	30	0	100	GOVERNMENT APPROVE ELEC. FIXTURES & EQUIP.	.00	.00	29JUL94A	27AUG94A			
47	45	0	100	FABRICATE & DELIVER MISC. METALS	17500.00	17500.00	8SEP94A	23OCT94A			
48	15	0	100	DELIVER REINFORCING STEEL	45000.00	45000.00	27JUL94A	16AUG94A			

Figure 6-1 Cont.

EP 4
415-1-1-4
31 Oct 97

O. Ben Construction Company

REPORT DATE 13JAN95 RUN NO. 271
13:20
SCHEDULE REPORT WITH ACTIVITY BUDGETS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 16AUG95
DATA DATE 28OCT94 PAGE NO. 3

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNSD	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
49	83	17	80	DELIVER ROOF DECK MATERIALS	.00	.00	21AUG94A	13NOV94			8JAN95 96
50	15	0	100	GOVERNMENT APPROVE ROOF & SHEE	.00	.00	11SEP94A	28SEP94A			
51	20	0	100	GOVERNMENT APPROVE X-RAY PROTE	.00	.00	14SEP94A	30CT94A			
52	73	73	0	DELIVER DOOR CANOPIES & SIGNS	10000.00	.00	28OCT94	10JAN95	10MAY95	23JUL95	196
53	30	0	100	GOVERNMENT TEST & DISAPPROVE PAINT	.00	.00	19SEP94A	18OCT94A			
54	30	0	100	GOVERNMENT APPROVE COLOR SAMPL. VINYL WALL	.00	.00	4SEP94A	18SEP94A			
55	20	0	100	GOVERNMENT APPROVE MILLWORK	.00	.00	12AU094A	25AU094A			
56	30	0	100	GOVERNMENT APPROVE & COLOR SEL	.00	.00	21SEP94A	13OCT94A			
57	30	0	100	GOVERNMENT APPROVE CASEWORK	.00	.00	29SEP94A	26OCT94A			
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	.00	.00	23NOV94	22DEC94	1DEC94	30DEC94	8
59	20	0	100	GOVERNMENT APPROVE HISC. BUILD	.00	.00	4SEP94A	28SEP94A			
60	15	5	67	RESUBMIT PAINT SAMPLES	.00	.00	18OCT94A	1NOV94			17FEB95 108
61	30	30	0	GOVT. RETEST & APPROVE PAINT SAMPLES	.00	.00	2NOV94	1DEC94	18FEB95	19MAR95	108
62	10	0	100	ROUGH IN UNDER BASEMENT	10000.00	10000.00	15AU094A	26AU094A			
63	43	0	100	DELIVER PAN FORMS	.00	.00	21AUG94A	10OCT94A			
64	90	27	70	FABRICATE & DELIVER METAL DOORS	10000.00	.00	26AU094A	23NOV94			24DEC94 31
65	43	0	100	FABRICATE & DELIVER STEEL COLUMNS	7500.00	7000.00	29AU094A	14OCT94A			
66	90	28	69	FABRICATE & DELIVER STRUCT. STEEL	95000.00	7500.00	65433.00	27AU094A	24NOV94		29DEC94 35
67	2	2	0	SAMPLE MASONRY PANEL	.00	.00	13NOV94	14NOV94	23JAN95	24JAN95	71
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	10000.00	.00	28OCT94	25JAN95	30OCT94	27JAN95	2
69	120	120	0	DELIVER BUILDER'S HARDWARE	45000.00	.00	18NOV94	17MAR95	11NOV94	10MAR95	-7
70	90	15	83	FABRICATE & DELIVER ALUM. ENTRANCE	22500.00	.00	14AU094A	11NOV94			10MAR95 119
71	30	30	0	DELIVER LATH & PLASTER MATERIALS	.00	18742.50	28OCT94	26NOV94	23FEB95	24MAR95	118
72	43	43	0	DELIVER CERAMIC TILE MATERIAL	45000.00	.00	28OCT94	11DEC94	26FEB95	11APR95	121

Figure 6-1 Cont.

REPORT DATE 13JAN95 RUN NO. 271
13:20

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT WITH ACTIVITY BUDGETS

DATA DATE 28OCT94 PAGE NO. 4

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNEED	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
73	90	90	0	DELIVER TOILET PARTITIONS & ACCESSORIES	20000.00	.00	28OCT94	25JAN95	18APR95	16JUL95	172
74	150	105	30	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	215000.00	64500.00	13SEP94A	9FEB95		17MAY95	97
75	120	60	50	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	115000.00	37500.00	29NOV94A	26DEC94		16JUN95	170
76	60	60	0	FABRICATE & DELIVER SHEETMETAL ROOF	.00	.00	28OCT94	26DEC94	22NOV94	20JAN95	25
77	75	75	0	DELIVER PROTECTION MATERIALS	17500.00	.00	28OCT94	10JAN95	12DEC94	24FEB95	45
78	45	45	0	DELIVER PAINT MATERIALS	.00	.00	2DEC94	15JAN95	20MAR95	3MAY95	108
79	60	60	0	DELIVER VINYL WALL COVERING	7500.00	.00	28OCT94	26DEC94	21MAY95	19JUL95	205
80	120	57	33	FABRICATE & DELIVER MILLWORK	30000.00	15730.00	26AUG94A	23DEC94		12JUN95	171
81	45	30	33	DELIVER RESILIENT FLOOR MATERIALS	17500.00	5827.50	13OCT94A	26NOV94		7JUN95	193
82	150	150	0	DELIVER CASEWORK	80000.00	.00	28OCT94	26MAR95	10FEB95	9JUL95	105
83	180	180	0	DELIVER HOSPITAL & MISC. EQUIPMENT	115000.00	.00	23DEC94	20JUN95	31DEC94	28JUN95	8
84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	30000.00	.00	28OCT94	25JAN95	21APR95	19JUL95	173
85	16	0	100	FOOTINGS & PLINTHS	22500.00	22500.00	15AUG94A	28AUG94A			
86	30	0	100	GRADEBEAMS	50000.00	50000.00	29SEP94A	8OCT94A			
87	14	0	100	BASEMENT FOUNDATION SLABS & BEAMS	15000.00	15000.00	27AUG94A	11SEP94A			
88	21	0	100	BASEMENT WALLS	22500.00	22500.00	12SEP94A	20CT94A			
89	5	0	100	DAMPROOFING	7500.00	7500.00	3OCT94A	6OCT94A			
91	10	0	100	BACKFILL & GRADE UNDER BUILDING	22500.00	22500.00	9OCT94A	20OCT94A			
92	10	10	0	BASEMENT STEPS & LANDINGS	4500.00	.00	28OCT94	6NOV94	15JAN95	24JAN95	79
93	20	12	40	30% UNDERFLOOR MECH. & ELEC. R	59000.00	23600.00	20OCT94A	8NOV94		4NOV94	-4
94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	87500.00	.00	9NOV94	28DEC94	5NOV94	24DEC94	-4
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	135000.00	.00	9NOV94	28DEC94	5NOV94	24DEC94	-4
97	18	18	0	CONCRETE TOPPING FILL	27500.00	.00	29DEC94	13JAN95	7FEB95	24FEB95	40
98	63	63	0	ELECTRICAL ROUGH IN	100000.00	.00	29DEC94	1MAR95	6FEB95	7APR95	37

Figure 6-1 Cont.

Moygreen Construction Company

REPORT DATE 13JAN95 RUN NO. 271

13:20

SCHEDULE REPORT WITH ACTIVITY BUDGETS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95*

DATA DATE 28OCT94 PAGE NO. 5

ACTIVITY ID	ORIG REN DUR	NEW DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNEED	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
99	70	70	0	MECHANICAL & PLUMBING ROUGH IN	105000.00	.00	29DEC94	30MAR95	28JAN95	7APR95	30
100	5	5	0	ERECT STEEL COLUMNS & METAL DUCKS	5000.00	.00	29DEC94	2JAN95	25DEC94	29DEC94	-4
102	10	10	0	ERECT STRUCTURAL STEEL & JOISTS	17500.00	.00	3JAN95	12JAN95	30DEC94	BJAN95	-4
103	27	27	0	EXTERIOR MASONRY WALLS	47500.00	.00	3JAN95	29JAN95	25JAN95	20FEB95	22
108	14	14	0	INSTALL METAL DOORS & ALUMINUM ENTRANCE	10000.00	.00	10MAR95	31MAR95	11MAR95	24MAR95	-7
109	12	12	0	INSTALL ROOF DECK	47500.00	.00	13JAN95	24JAN95	9JAN95	20JAN95	-4
110	21	21	0	ROOFING & SHEET METAL	80000.00	.00	25JAN95	14FEB95	21JAN95	10FEB95	-4
111	14	14	0	INSTALL METAL WINDOWS	2500.00	.00	26JAN95	8FEB95	28JAN95	10FEB95	2
113	56	56	0	AIRCONDITIONING DUCTWORK	115000.00	.00	15FEB95	11APR95	11FEB95	7APR95	-4
114	42	42	0	INTERIOR PARTITIONS	85000.00	.00	19FEB95	28MAR95	25FEB95	7APR95	10
116	14	14	0	STUCCO	10000.00	.00	1APR95	14APR95	25MAR95	7APR95	-7
120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	27500.00	.00	15APR95	28APR95	18APR95	21APR95	-7
121	14	14	0	PLASTER WALLS	9000.00	.00	15APR95	28APR95	20APR95	3MAY95	5
122	22	22	0	CERAMIC TILE	22500.00	.00	15APR95	6MAY95	12APR95	3MAY95	-3
124	35	35	0	ACOUSTIC & OTHER CEILINGS	35000.00	.00	29APR95	2JUN95	27APR95	31MAY95	-2
125	12	12	0	PLASTER CEILINGS	4000.00	.00	29APR95	10MAY95	22APR95	3MAY95	-7
128	17	17	0	TOILET PARTITIONS & ACCESSORIES	3500.00	.00	7MAY95	23MAY95	17JUL95	2AUG95	71
130	28	28	0	30% PAINT & FINISH	19500.00	.00	11MAY95	7JUN95	4MAY95	31MAY95	-7
133	70	70	0	INSTALL MECHANICAL EQUIPMENT	25000.00	.00	11MAY95	19JUL95	18MAY95	26JUL95	7
139	45	45	0	50% COMPLETE PAINT & FINISH	32500.00	.00	8JUN95	22JUL95	1JUN95	19JUL95	-7
140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	15000.00	.00	8JUN95	19JUL95	15JUN95	26JUL95	7
141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT	12500.00	.00	8JUN95	7JUL95	27JUN95	26JUL95	19
142	14	14	0	VINYL WALL COVER	5000.00	.00	8JUN95	21JUN95	20JUL95	2AUG95	42
143	16	16	0	INSTALL 50% MILLWORK	7500.00	.00	8JUN95	23JUN95	19JUN95	28JUN95	5

Figure 6-1 Cont.

1 Oct 97

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION								TOTAL FLOAT
				BUDGET	EARNED	EARLY START	EARLY FINISH	LATE START	LATE FINISH			
144	21	21	0	INSTALL RESILIENT FLOORS	7500.00	.00	8JUN93	28JUN93	8JUN93	28JUN93	0	
146	16	16	0	COMPLETE MILLWORK	7500.00	.00	24JUN93	9JUL93	30JUN93	19JUL93	6	
150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION	.00	.00	29JUN93	1JUL93	31JUL93	2AUG93	32	
151	24	24	0	INSTALL CASEWORK	15000.00	.00	29JUN93	22JUL93	10JUL93	2AUG93	11	
152	35	35	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	20000.00	.00	29JUN93	2AUG93	29JUN93	2AUG93	0	
153	14	14	0	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	4000.00	.00	29JUN93	12JUL93	20JUL93	2AUG93	21	
154	10	10	0	INSTALL DOOR CANOPIES & SIGNS	2500.00	.00	30JAN93	8FEB93	24JUL93	2AUG93	173	
155	18	18	0	20% PAINT & FINISH	13000.00	.00	23JUL93	9AUG93	16JUL93	2AUG93	-7	
156	7	7	0	CLEAN UP BUILDING	5000.00	.00	10AUG93	16AUG93	3AUG93	9AUG93	-7	
157	45	0	100	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	.00	.00	23AUG94A	23SEP94A				
160	60	60	0	DELIVER & INSTALL STORM DRAINS	50000.00	.00	28OCT94	26DEC94	3MAY95	1MAY95	126	
161	45	45	0	OUTSIDE PLUMBING	35000.00	.00	28OCT94	11DEC94	18MAY95	1MAY95	141	
162	90	90	0	OUTSIDE ELECTRICAL	120000.00	.00	28OCT94	25JAN95	1FEB95	1MAY95	96	
167	42	42	0	SUBGRADE & BASE FOR PAVING	67500.00	.00	26JAN95	8MAR95	2MAY95	12JUN95	96	
168	21	21	0	CURB & GUTTER	20000.00	.00	9MAR95	29MAR95	13JUN95	3JUL95	96	
169	21	21	0	SIDEWALKS	20000.00	.00	30MAR95	19APR95	4JUL95	24JUL95	96	
170	10	10	0	ASPHALT PAVING	32500.00	.00	30MAR95	8APR95	15JUL95	24JUL95	107	
172	16	16	0	TOPSOIL & FINE GRADING	10000.00	.00	20APR95	5MAY95	25JUL95	9AUG95	96	
173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT	15000.00	.00	20JUL95	2AUG95	27JUL95	9AUG95	7	
174	5	5	0	SELL JOB	5000.00	.00	17AUG95	21AUG95	10AUG95	16AUG95	-7	
200	1	0	100	C.O. TO USE SOME OF HOSP. EQUIP.	.00	.00	28SEP94A	28SEP94A				
201	25	0	100	NEG. CHANGE ORDER NO. 1	.00	.00	29SEP94A	23OCT94A				
202	30	26	13	RESUB. HOSP. & MIS. EQUIP.	.00	.00	24OCT94A	22NOV94			8	
203	240	237	1	DELIVER GOVT. FURN. HOSP. EQUIP.	.00	.00	25OCT94A	21JUN95			7	

REPORT TOTAL

~~2900000.00~~ 661375.00

Figure 6-1 Cont.

Moygreen Construction Company

REPORT DATE 13JAN95 RUN NO. 272
13:23
EARLY START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14NOV95+
DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG REN DUR	NEW DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	28OCT94	25JAN95	30OCT94	27JAN95	2
76	60	60	0	FABRICATE & DELIVER SHEETMETAL ROOF	28OCT94	26OCT94	22NOV94	20JAN95	23
77	75	75	0	DELIVER PROTECTION MATERIALS	28OCT94	10JAN95	12DEC94	26FEB95	43
92	10	10	0	BASEMENT STEPS & LANDINGS	28OCT94	6NOV94	15JAN95	24JAN95	79
162	90	90	0	OUTSIDE ELECTRICAL	28OCT94	25JAN95	1FEB95	1MAY95	96
82	150	150	0	DELIVER CASEWORK	28OCT94	28MAR95	10FEB95	9JULY95	103
71	30	30	0	DELIVER LATH & PLASTER MATERIALS	28OCT94	26NOV94	23FEB95	24MARCH95	110
72	45	45	0	DELIVER CERAMIC TILE MATERIAL	28OCT94	11DEC94	26FEB95	11APR95	121
160	60	60	0	DELIVER & INSTALL STORM DRAINS	28OCT94	26OCT94	3MAY95	1MAY95	126
161	45	45	0	OUTSIDE PLUMBING	28OCT94	11DEC94	18MAY95	1MAY95	141
73	90	90	0	DELIVER TOILET PARTITIONS & ACCESSORIES	28OCT94	25JAN95	18APR95	16JULY95	172
84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	28OCT94	25JAN95	21APR95	19JULY95	173
52	75	75	0	DELIVER DOOR CANOPIES & SIGNS	28OCT94	10JAN95	10MAY95	23JULY95	196
79	60	60	0	DELIVER VINYL WALL COVERING	28OCT94	26OCT94	21MAY95	19JULY95	203
61	30	30	0	GOVT. RETEST & APPROVE PAINT SAMPLES	2NOV94	10DEC94	18FEB95	19MARCH95	106
94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	28DEC94	5NOV94	24DEC94	-4
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	5NOV94	28DEC94	5NOV94	24DEC94	-4
67	2	2	0	SAMPLE MASONRY PANEL	13NOV94	14NOV94	23JAN95	24JAN95	71
69	120	120	0	DELIVER BUILDER'S HARDWARE	18NOV94	17MARCH95	11NOV94	10MARCH95	-7
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	1DEC94	30DEC94	8
78	45	45	0	DELIVER PAINT MATERIALS	2OEC94	15JAN95	20MARCH95	3MAY95	108
83	180	180	0	DELIVER HOSPITAL & MISC. EQUIPMENT	23DEC94	20JUN95	31DEC94	28JUN95	8

Figure 6-2

REPORT DATE 13JAN95 RUN NO. 273
13:25
EARLY FINISH NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER

START DATE 1JUL94 FIN DATE 16AUG95*
DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG REM DUR	DUR %	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
60	15	5	67 RESUBMIT PAINT SAMPLES	18OCT94A	1NOV94		17FEB95	108
92	10	10	0 BASEMENT STEPS & LANDINGS	28OCT94	6NOV94	19JAN95	26JAN95	77
93	20	12	40 30% UNDERFLOOR MECH. & ELEC. R	20OCT94A	8NOV94		6NOV94	-4
70	90	15	83 FABRICATE & DELIVER ALUM. ENTRANCE	14AUG94A	11NOV94		10MAR95	119
38	80	16	80 DELIVER MASONRY MATERIALS	26AUG94A	12NOV94		22JAN95	71
49	85	17	80. DELIVER ROOF DECK MATERIALS	21AUG94A	13NOV94		8JAN95	96
67	2	2	0 SAMPLE MASONRY PANEL	13NOV94	14NOV94	23JAN95	24JAN95	71
28	29	20	31 PRE-QUALIFY WELDERS	20AUG94A	16NOV94		29DEC94	43
40	30	21	30 GOVERNMENT APPROVE BUILDER'S H	19OCT94A	17NOV94		10NOV94	-7
202	30	26	13 RESUB. HOSP. & MISC. EQUIP.	24OCT94A	22NOV94		30NOV94	8
64	90	27	70 FABRICATE & DELIVER METAL DOORS	26AUG94A	23NOV94		24DEC94	31
66	90	28	69 FABRICATE & DELIVER STRUCT. STEEL	27AUG94A	24NOV94		29DEC94	35
71	30	30	0 DELIVER LATH & PLASTER MATERIALS	28OCT94	26NOV94	23FEB95	24MAR95	110
81	45	30	33 DELIVER RESILIENT FLOOR MATERIALS	13OCT94A	26NOV94		7JUN95	193
61	30	30	0 GOVT. RETEST & APPROVE PAINT SAMPLES	2NOV94	1DEC94	18FEB95	19MAR95	100
72	45	45	0 DELIVER CERAMIC TILE MATERIAL	28OCT94	11DEC94	26FEB95	11APR95	121
161	45	45	0 OUTSIDE PLUMBING	28OCT94	11DEC94	18MAR95	1MAY95	141
38	30	30	0 GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	1DEC94	30DEC94	8
80	120	57	53 FABRICATE & DELIVER MILLWORK	26AUG94A	23DEC94		12JUN95	171
76	60	60	0 FABRICATE & DELIVER SHEETMETAL\ROOF	28OCT94	26DEC94	22NOV94	20JAN95	23
160	60	60	0 DELIVER & INSTALL STORM DRAINS	28OCT94	23DEC94	3MAR95	1MAY95	126
75	120	60	50 DELIVER ELECTRICAL FIXTURES & EQUIPMENT	29AUG94A	26DEC94		14JUN95	170
79	60	60	0 DELIVER VINYL WALL COVERING	28OCT94	26DEC94	21MAY95	19JUL95	205
94	50	50	0 FORM, PLACE, & CURE PAN SLABS & BEAMS	5NOV94	28DEC94	5NOV94	24DEC94	-4
95	50	50	0 70% UNDERFLOOR MECH. & ELEC. R	5NOV94	28DEC94	5NOV94	24DEC94	-4

Figure 6-3

REPORT DATE 13JAN95 RUN NO. 278

13:34

PRIMAVERA PROJECT

PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*

GOVERNMENT RESPONSIBILITY

DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG REN DUR	DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
1	1	0	100	NOTICE TO PROCEED	1JUL94A	1JUL94A			
46	30	0	100	GOVERNMENT APPROVE ELEC. FIXTURES & EQUIP.	29JUL94A	27AUG94A			
41	20	0	100	GOVERNMENT APP. ALUM. ENTRANCE	31JUL94A	16AUG94A			
35	15	0	100	GOVERNMENT APPROVE PAN FORMS	4AUG94A	19AUG94A			
45	30	0	100	GOVT. APPROVE PLUMB. FIXTURES	7AUG94A	4SEP94A			
37	20	0	100	GOVERNMENT APPROVE STRUCT. STE	8AUG94A	23AUG94A			
36	15	0	100	GOVERNMENT APPROVE METAL DOOR	10AUG94A	21AUG94A			
55	20	0	100	GOVERNMENT APPROVE MILLWORK	12AUG94A	23AUG94A			
54	30	0	100	GOVERNMENT APPROVE COLOR SAND. VINYL WALL	4SEP94A	18SEP94A			
59	20	0	100	GOVERNMENT APPROVE NISC. BUILD	4SEP94A	28SEP94A			
43	30	0	100	GOVERNMENT APPROVE CERAMIC TIL	9SEP94A	30CT94A			
44	20	0	100	GOVERNMENT APPROVE TOILET PART	10SEP94A	10OCT94A			
50	15	0	100	GOVERNMENT APPROVE ROOF & SHEE	11SEP94A	28SEP94A			
51	20	0	100	GOVERNMENT APPROVE X-RAY PROTE	14SEP94A	30CT94A			
42	15	0	100	GOVERNMENT APPROVE LATH & PLAS	19SEP94A	30CT94A			
53	30	0	100	GOVERNMENT TEST & DISAPPROVE PAINT	19SEP94A	18OCT94A			
39	20	0	100	GOVERNMENT APPROVE METAL WINDOWS	20SEP94A	4OCT94A			
56	30	0	100	GOVERNMENT APPROVE & COLOR SEL	21SEP94A	13OCT94A			
200	1	0	100	C.O. TO USE SOME OF HOSP. EQUIP.	28SEP94A	28SEP94A			
57	30	0	100	GOVERNMENT APPROVE CASEWORK	29SEP94A	26OCT94A			
201	25	0	100	REQ. CHANGE ORDER NO. 1	29SEP94A	23OCT94A			
40	30	21	30	GOVERNMENT APPROVE BUILDER'S R	19OCT94A	17NOV94		10NOV94	-7
203	240	237	1	DELIVER GOVT. FURN. HOSP. EQUIP.	25OCT94A	21JUN95		20JUN95	7
61	30	30	0	GOVT. RETEST & APPROVE PAINT SAMPLES	2NOV94	1DEC94	18FEB93	19MAR93	108
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	1DEC94	30DEC94	8
150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION	29JUN95	1JUL95	31JUL95	2AU895	32

Figure 6-4

13:29

LATE FINISH NEXT TWO MONTHS

DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
93	20	12	40	30X UNDERFLOOR MECH. & ELEC. R	20OCT94A	2NOV94	4NOV94	-4
40	30	21	30	GOVERNMENT APPROVE BUILDER'S R	19OCT94A	17NOV94	10NOV94	-7
202	30	26	13	RESUB. HOSP. & MISC. EQUIP.	24OCT94A	22NOV94	30NOV94	8
94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	2NOV94	28DEC94	5NOV94	24DEC94
95	50	50	0	70X UNDERFLOOR MECH. & ELEC. R	2NOV94	28DEC94	5NOV94	24DEC94
64	90	27	70	FABRICATE & DELIVER METAL DOORS	26AUG94A	23NOV94	24DEC94	31

6-12

Figure 6-5

Oct 97

Hoygreen Construction Company

REPORT DATE 13JAN95 RUN NO. 274
13:27
LATE START NEXT TWO MONTHS

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95*
DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	28OCT94	25JAN95	30OCT94	27JAN95	2
94	50	50	0	FORM, PLACE, & CURE PAV SLABS & BEAMS	5NOV94	28DEC94	5NOV94	24DEC94	-4
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	5NOV94	28DEC94	5NOV94	24DEC94	-4
69	120	120	0	DELIVER BUILDER'S HARDWARE	18NOV94	17MAR95	11NOV94	10MAR95	-7
76	60	60	0	FABRICATE & DELIVER SHEETMETAL\ROOF	28OCT94	26DEC94	22NOV94	20JAN95	25
58	30	30	0	GOVERNMENT APPROVE HOSPITAL E	23NOV94	22DEC94	10DEC94	30DEC94	8
77	75	75	0	DELIVER PROTECTION MATERIALS	28OCT94	10JAN95	12DEC94	24FEB95	45
100	5	5	0	ERECT STEEL COLUMNS & METAL BRACKS	29DEC94	2JAN95	25DEC94	29DEC94	-4

6-1

Figure 6-6

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	BUDGET	EARNED	SCHEDULED START	FINISH
3	30	0	100	SUBMIT & APPROVE MECH/ELEC R.I.	.00	.00	9JUL94A	4AUG94A
12	30	0	100	SUBMIT PLUMBING FIXTURES & MEC	.00	.00	9JUL94A	7AUG94A
13	30	0	100	SUBMIT ELECTRIC FIXTURES & EQUIP.	.00	.00	2JUL94A	28JUL94A
29	45	0	100	SUBMIT & APPROVE SHP DRUG OS E	.00	.00	6JUL94A	21AUG94A
34	15	0	100	DELIVER MECHANICAL & ELECTRICAL RI. MAT.	65000.00	65000.00	5AUG94A	14AUG94A
74	150	105	30	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	215000.00	64500.00	13SEP94A	9FEB95
75	120	60	50	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	115000.00	57500.00	29AUG94A	26DEC94
93	20	12	40	30% UNDERFLOOR MECH. & ELEC. R	59000.00	23600.00	20OCT94A	8NOV94
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	135000.00	.00	9NOV94	20DEC94
98	63	63	0	ELECTRICAL ROUGH IN	100000.00	.00	29DEC94	1MAR95
99	70	70	0	MECHANICAL & PLUMBING ROUGH IN	105000.00	.00	29DEC94	8MAR95
113	56	56	0	AIRCONDITIONING DUCTWORK	115000.00	.00	15FEB95	11APR95
133	70	70	0	INSTALL MECHANICAL EQUIPMENT	25000.00	.00	11MAY95	19JUL95
140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	15000.00	.00	8JUN95	19JUL95
141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT	12500.00	.00	8JUN95	7JUL95
157	45	0	100	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	.00	.00	23AU94A	23SEP94A
161	45	45	0	OUTSIDE PLUMBING	35000.00	.00	28OCT94	11DEC94
162	90	90	0	OUTSIDE ELECTRICAL	120000.00	.00	28OCT94	25JAN95
173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT	15000.00	.00	20JUL95	2AUG95

REPORT TOTAL
1131500.00 210600.00

Figure 6-7

Moygreen Construction Company

REPORT DATE 13JAN95 RUN NO. 279
13:35

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 28OCT94 PAGE NO. 1

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL
									FLOAT
.. 1*	1	0	100 PR	NOTICE TO PROCEED	1JUL94A	1JUL94A			
.. 28	29	20	31	PRE-QUALIFY WELDERS	20AUG94A	16NOV94			
.. 102	10	10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	3DEC94	8JAN95	-4
.. 32*	45	0	100 PR	SUBMIT & APPROVE MASONRY MATERIAL	12JUL94A	26AUG94A			
.. 38	80	16	80	DELIVER MASONRY MATERIALS	26AUG94A	12NOV94			
.. 67*	2	2	0 SU	SAMPLE MASONRY PANEL	13NOV94	14NOV94	23JAN95	24JAN95	71
.. 7*	29	0	100 PR	SUBMIT LISTS & SAMPLES BUILDERS HARDWARE	15AUG94A	18OCT94A			
.. 40	30	21	30	GOVERNMENT APPROVE BUILDER'S H	19OCT94A	17NOV94			
.. 69*	120	120	0 SU	DELIVER BUILDER'S HARDWARE	18NOV94	17MARS95	11NOV94	10MARS95	-7
.. 16*	45	0	100 PR	SUBMIT & APPROVE ROOF DECK SNO	6JUL94A	20AUG94A			
.. 49	85	17	80	DELIVER ROOF DECK MATERIALS	21AUG94A	13NOV94			
.. 109	12	12	0 SU	INSTALL ROOF DECK	13JAN95	24JAN95	9JAN95	20JAN95	-6
.. 19*	39	0	100 PR	SUBMIT & APPROVE DOOR CANOPIES	26JUL94A	8SEP94A			
.. 52	75	75	0	DELIVER DOOR CANOPIES & SIGNS	28OCT94	10JAN95	10MAY95	23JUL95	194
.. 154	10	10	0 SU	INSTALL DOOR CANOPIES & SIGNS	30JAN95	8FEB95	24JUL95	2AUG95	175
.. 25	44	0	100 PR	SUBMIT HOSPITAL & MISC. EQUIPMENT	26JUL94A	8SEP94A			
.. 202*	30	26	13 PR	RESUB. HOSP. & MISC. EQUIP.	24OCT94A	22NOV94			
.. 58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	1DEC94	30DEC94	8
.. 83*	180	180	0 SU	DELIVER HOSPITAL & MISC. EQUIPMENT	23DEC94	20JUN95	31DEC94	28JUN95	8
.. 53*	30	0	100 PR	GOVERNMENT TEST & DISAPPROVE PAINT	19SEP94A	18OCT94A			
.. 60	15	5	67	RESUBMIT PAINT SAMPLES	18OCT94A	1NOV94			
.. 61*	30	30	0 SU	GOVT. RETEST & APPROVE PAINT SAMPLES	2NOV94	1DEC94	18FEB95	19MAR95	108
.. 60*	15	5	67 PR	RESUBMIT PAINT SAMPLES	18OCT94A	1NOV94			
.. 61	30	30	0	GOVT. RETEST & APPROVE PAINT SAMPLES	2NOV94	1DEC94	18FEB95	19MAR95	108
.. 78*	45	45	0 SU	DELIVER PAINT MATERIALS	2DEC94	15JAN95	20MAR95	3MAY95	108
.. 36*	15	0	100 PR	GOVERNMENT APPROVE METAL DOOR	10AUG94A	21AUG94A			
.. 64	90	27	70	FABRICATE & DELIVER METAL DOORS	26AUG94A	23NOV94			
.. 100	5	5	0 SU	ERECT STEEL COLUMNS & METAL BUCKS	29DEC94	2JAN95	25DEC94	29DEC94	-4
.. 37*	20	0	100 PR	GOVERNMENT APPROVE STRUCT. STE	8AUG94A	25AUG94A			
.. 66	90	28	69	FABRICATE & DELIVER STRUCT. STEEL	27AUG94A	24NOV94			
.. 102	10	10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	3DEC94	8JAN95	-4
.. 38*	80	16	80 PR	DELIVER MASONRY MATERIALS	26AUG94A	12NOV94			
.. 67	2	2	0	SAMPLE MASONRY PANEL	13NOV94	14NOV94	23JAN95	24JAN95	71
.. 103	27	27	0 SU	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 39*	20	0	100 PR	GOVERNMENT APPROVE METAL WINDOWS	20SEP94A	4OCT94A			
.. 68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	28OCT94	25JAN95	3OCT94	27JAN95	2
.. 111*	14	14	0 SU	INSTALL METAL WINDOWS	26JAN95	8FEB95	28JAN95	10FEB95	2

Figure 6-8

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 40*	30	21	30 PR	GOVERNMENT APPROVE BUILDER'S H DELIVER BUILDER'S HARDWARE	19OCT94A	17NOV94		10NOV94	-7
.. 69	120	120	0	INSTALL METAL DOORS & ALUMINUM ENTRANCE	18NOV94	17MAR95	11NOV94	10MAR95	-7
.. 108*	14	14	0 SU		10MAR95	31MAR95	11MAR95	24MAR95	-7
.. 41*	20	0	100 PR	GOVERNMENT APP. ALUM. ENTRANCE FABRICATE & DELIVER ALUM. ENTRANCE	31JUL94A	14AUG94A			
.. 70	90	15	83	INSTALL METAL DOORS & ALUMINUM ENTRANCE	16AUG94A	11NOV94			
.. 108	14	14	0 SU		18MAR95	31MAR95	11MAR95	24MAR95	-7
.. 42*	15	0	100 PR	GOVERNMENT APPROVE LATH & PLAS DELIVER LATH & PLASTER MATERIALS	19SEP94A	3OCT94A			
.. 71	30	30	0	STUCCO	20OCT94	26NOV94	23FEB95	26MAR95	118
.. 116	14	14	0 SU		1APR95	14APR95	25MAR95	7APR95	-7
.. 43*	30	0	100 PR	GOVERNMENT APPROVE CERAMIC TIL DELIVER CERAMIC TILE MATERIAL	9SEP94A	3OCT94A			
.. 72	45	45	0	CERAMIC TILE	28OCT94	11DEC94	26FEB95	11APR95	121
.. 122	22	22	0 SU		15APR95	6MAY95	12APR95	3MAY95	-3
.. 44*	20	0	100 PR	GOVERNMENT APPROVE TOILET PART DELIVER TOILET PARTITIONS & ACCESSORIES	10SEP94A	10OCT94A			
.. 73	90	90	0	TOILET PARTITIONS & ACCESSORIES	28OCT94	25JAN95	18APR95	16JUL95	172
.. 128	17	17	0 SU		7MAY95	23MAY95	17JUL95	2APR95	71
.. 45*	30	0	100 PR	GOVT. APPROVE PLUMB. FIXTURES DELIVER PLUMB. FIXTURES & MECH. EQUIP.	7AUG94A	4SEP94A			
.. 74	150	105	30	INSTALL MECHANICAL EQUIPMENT	13SEP94A	9FEB95			
.. 133	70	70	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	11MAY95	19JUL95	18MAY95	26JUL95	7
.. 141	30	30	0 SU		8JUN95	7JUL95	27JUN95	26JUL95	19
.. 46*	30	0	100 PR	GOVERNMENT APPROVE ELEC. FIXTURES & EQUIP. DELIVER ELECTRICAL FIXTURES & EQUIPMENT	29JUL94A	27AUG94A			
.. 75	120	60	50	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	29AUG94A	26DEC94			
.. 140	42	42	0 SU		8JUN95	19JUL95	15JUN95	26JUL95	7
.. 50*	15	0	100 PR	GOVERNMENT APPROVE ROOF & SHEE FABRICATE & DELIVER SHEETMETAL\ROOF	11SEP94A	28SEP94A			
.. 76	60	60	0	ROOFING & SHEET METAL	28OCT94	26DEC94	22NOV94	20JAN95	29
.. 110	21	21	0 SU		25JAN95	14FEB95	21JAN95	10FEB95	-4
.. 51*	20	0	100 PR	GOVERNMENT APPROVE X-RAY PROTE DELIVER PROTECTION MATERIALS	14SEP94A	8OCT94A			
.. 77	75	75	0	INTERIOR PARTITIONS	28OCT94	10JAN95	12DEC94	24FEB95	45
.. 114	42	42	0 SU		15FEB95	20MAR95	25FEB95	7APR95	10
.. 61*	30	30	0 PR	GOVT. RETEST & APPROVE PAINT SAMPLES DELIVER PAINT MATERIALS	2NOV94	1DEC94	18FEB95	19MAR95	108
.. 78	45	45	0	30% PAINT & FINISH	2DEC94	15JAN95	20MAR95	3MAY95	108
.. 130	28	28	0 SU		11MAY95	7JUN95	4MAY95	31MAY95	-7
.. 54*	30	0	100 PR	GOVERNMENT APPROVE COLOR Samp. VINYL WALL DELIVER VINYL WALL COVERING	4SEP94A	18SEP94A			
.. 79	60	60	0	VINYL WALL COVER	28OCT94	26DEC94	21MAY95	19JUL95	205
.. 162	14	14	0 SU		8JUN95	21JUN95	20JUL95	2APR95	42
.. 55*	20	0	100 PR	GOVERNMENT APPROVE MILLWORK FABRICATE & DELIVER MILLWORK	12AUG94A	25AUG94A			
.. 80	120	57	53	INSTALL 50% MILLWORK	26AUG94A	23DEC94			
.. 143	16	16	0 SU		8JUN95	23JUN95	13JUN95	28JUN95	171
									5

Figure 6-8 Cont.

435-C-1-1-97
1 OCT 94

Moygreen Construction Company

PRIMAVERA PROJECT PLA

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 13JAN95 RUN NO. 279

13:35

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95^a

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 28OCT94 PAGE NO. 3

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 56*	30	0	100 PR	GOVERNMENT APPROVE & COLOR SEL	21SEP94A	13OCT94A			
.. 81	45	30	33	DELIVER RESILIENT FLOOR MATERIALS	13OCT94A	26NOV94			
.. 144	21	21	0 SU	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	193 0
.. 57*	30	0	100 PR	GOVERNMENT APPROVE CASEWORK	29SEP94A	26OCT94A			
.. 82	150	150	0	DELIVER CASEWORK	28OCT94	26MAR95	10FEB95	9JUL95	105
.. 151	24	24	0 SU	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11
.. 58*	30	30	0 PR	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	10DEC94	30DEC94	8
.. 83	180	180	0	DELIVER HOSPITAL & MISC. EQUIPMENT	23DEC94	20JUN95	31DEC94	28JUN95	8
.. 152	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AU95	29JUN95	2AU95	0
.. 59*	20	0	100 PR	GOVERNMENT APPROVE MISC. BUILD	4SEP94A	28SEP94A			
.. 84	90	90	0	DELIVER MISC. BUILDING EQUIPMENT	28OCT94	25JAN95	21APR95	19JUL95	173
.. 153	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	29JUN95	12JUL95	20JUL95	2AU95	21
.. 47*	45	0	100 PR	FABRICATE & DELIVER MISC. METALS	8SEP94A	23OCT94A			
.. 86*	30	0	100 PR	GRADEBEAMS	29SEP94A	8OCT94A			
.. 89*	5	0	100 PR	DAMPPROOFING	3OCT94A	6OCT94A			
.. 92	10	10	0	BASEMENT STEPS & LANDINGS	28OCT94	6NOV94	15JAN95	24JAN95	79
.. 103	27	27	0 SU	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 91*	10	0	100 PR	BACKFILL & GRADE UNDER BUILDING	9OCT94A	20OCT94A			
.. 93	20	12	40	30% UNDERFLOOR MECH. & ELEC. R.	20OCT94A	8NOV94			
.. 94*	50	50	0 SU	FORM, PLACE, & CURE PAN SLABS & BEAMS	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 95*	50	50	0 SU	70% UNDERFLOOR MECH. & ELEC. R	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 63	45	0	100 PR	DELIVER PAN FORMS	21AUG94A	10OCT94A			
.. 93*	20	12	40 PR	30% UNDERFLOOR MECH. & ELEC. R.	20OCT94A	8NOV94			
.. 94	50	50	0	FORM, PLACE, & CURE PAN SLABS & BEAMS	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 97*	18	18	0 SU	CONCRETE TOPPING FILL	29DEC94	15JAN95	7FEB95	24FEB95	40
.. 98*	63	63	0 SU	ELECTRICAL ROUGH IN	29DEC94	1MAR95	4FEB95	7APR95	37
.. 99*	70	70	0 SU	MECHANICAL & PLUMBING ROUGH IN	29DEC94	8MAR95	28JAN95	7APR95	30
.. 100*	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	25DEC94	29DEC94	-4
.. 63	45	0	100 PR	DELIVER PAN FORMS	21AUG94A	10OCT94A			
.. 93*	20	12	40 PR	30% UNDERFLOOR MECH. & ELEC. R.	20OCT94A	8NOV94			
.. 95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 100*	5	5	0 SU	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	25DEC94	29DEC94	-4
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAN SLABS & BEAMS	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 97	18	18	0	CONCRETE TOPPING FILL	29DEC94	15JAN95	7FEB95	24FEB95	40
.. 114	42	42	0 SU	INTERIOR PARTITIONS	15FEB95	28MAR95	25FEB95	7APR95	10
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAN SLABS & BEAMS	9NOV94	28DEC94	5NOV94	24DEC94	-4
.. 98	63	63	0	ELECTRICAL ROUGH IN	29DEC94	1MAR95	4FEB95	7APR95	37
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7

Figure 6-8 Cont.

REPORT DATE 13JAN95 RUN NO. 279
13:35

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95*

DATA DATE 28OCT94 PAGE NO. 4

ACTIVITY ID	ORIG DUR	REM DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAVEMENT SLABS & BEAMS	2NOV94	28DEC94	3NOV94	24DEC94	-4
.. 99	70	70	0	MECHANICAL & PLUMBING ROUGH IN	27DEC94	01MAR95	28JAN95	7APR95	30
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	28APR95	21APR95	-7
.. 64	90	27	70 PR	FABRICATE & DELIVER METAL DOORS	26AUG94A	23NOV94		24DEC94	31
.. 65	45	0	100 PR	FABRICATE & DELIVER STEEL COLUMNS	29AUG94A	16OCT94A			
.. 94*	50	50	0 PR	FORM, PLACE, & CURE PAVEMENT SLABS & BEAMS	2NOV94	28DEC94	3NOV94	24DEC94	-4
.. 95*	50	50	0 PR	70% UNDERFLOOR MECH. & ELEC. R	2NOV94	28DEC94	3NOV94	24DEC94	-4
.. 100	5	5	0	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	29DEC94	29DEC94	-4
.. 102*	10	10	0 SU	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	30DEC94	8JAN95	-4
.. 103*	27	27	0 SU	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 28	29	20	31 PR	PRE-QUALIFY WELDERS	20AUG94A	16NOV94		29DEC94	43
.. 66	90	28	69 PR	FABRICATE & DELIVER STRUCT. STEEL	27AUG94A	24NOV94		29DEC94	33
.. 100*	5	5	0 PR	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	29DEC94	29DEC94	-4
.. 102	10	10	0	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	30DEC94	8JAN95	-4
.. 109*	12	12	0 SU	INSTALL ROOF DECK	13JAN95	24JAN95	9JAN95	20JAN95	-4
.. 67	2	2	0 PR	SAMPLE MASONRY PANEL	13NOV94	14NOV94	23JAN95	24JAN95	71
.. 92	10	10	0 PR	BASEMENT STEPS & LANDINGS	20OCT94	6NOV94	15JAN95	24JAN95	79
.. 100*	5	5	0 PR	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	29DEC94	29DEC94	-4
.. 103	27	27	0	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 108	14	14	0 SU	INSTALL METAL DOORS & ALUMINUM ENTRANCE	10MAR95	31MAR95	11MAR95	24MAR95	-7
.. 111	14	14	0 SU SS	3 INSTALL METAL WINDOWS	26JAN95	0FEB95	28JAN95	10FEB95	2
.. 154*	10	10	0 SU	INSTALL DOOR CANOPIES & SIGNS	30JAN95	0FEB95	24JUL95	24JUL95	175
.. 172	16	16	0 SU	TOPSOIL & FINE GRADING	20APR95	5MAY95	25JUL95	24AUG95	96
.. 69*	120	120	0 PR	DELIVER BUILDER'S HARDWARE	18NOV94	17MAR95	11NOV94	10MAR95	-7
.. 70	90	15	83 PR	FABRICATE & DELIVER ALUM. ENTRANCE	14AUG94A	11NOV94		10MAR95	119
.. 103	27	27	0 PR	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 108	14	14	0	INSTALL METAL DOORS & ALUMINUM ENTRANCE	18MAR95	31MAR95	11MAR95	24MAR95	-7
.. 116*	14	14	0 SU	STUCCO	1APR95	16APR95	23MAR95	7APR95	-7
.. 49	85	17	80 PR	DELIVER ROOF DECK MATERIALS	21AUG94A	13NOV94		8JAN95	56
.. 102*	10	10	0 PR	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	30DEC94	8JAN95	-4
.. 109	12	12	0	INSTALL ROOF DECK	13JAN95	24JAN95	9JAN95	20JAN95	-4
.. 110*	21	21	0 SU	ROOFING & SHEET METAL	25JAN95	16FEB95	21JAN95	10FEB95	-4
.. 76	60	60	0 PR	FABRICATE & DELIVER SHEETMETAL\ROOF	28OCT94	26DEC94	22NOV94	20JAN95	25
.. 109*	12	12	0 PR	INSTALL ROOF DECK	13JAN95	24JAN95	9JAN95	20JAN95	-4
.. 110	21	21	0	ROOFING & SHEET METAL	25JAN95	16FEB95	21JAN95	10FEB95	-4
.. 113*	56	56	0 SU	AIRCONDITIONING DUCTWORK	15FEB95	11APR95	11FEB95	7APR95	-4
.. 116*	42	42	0 SU	INTERIOR PARTITIONS	15FEB95	20MAR95	25FEB95	7APR95	10
.. 116	14	14	0 SU	STUCCO	1APR95	16APR95	25MAR95	7APR95	-7
.. 68*	90	90	0 PR	3 FABRICATE & DELIVER METAL WINDOWS	28OCT94	25JAN95	30OCT94	27JAN95	2
.. 103	27	27	0 PR SS	3 EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 111	14	14	0	INSTALL METAL WINDOWS	26JAN95	0FEB95	28JAN95	10FEB95	2

Figure 6-8 Cont.

Mu, Green Construction Company

REPORT DATE 13JAN95 RUN NO. 279
13:35

PRIMAVERA PROJECT PLANNER

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL94 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 28OCT94 PAGE NO. 3

ACTIVITY ID	ORIG REN DUR	REN DUR	X	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 113	56	56	0 SU	AIRCONDITIONING DUCTWORK	15FEB95	11APR95	11FEB95	7APR95	-4
.. 110*	21	21	0 PR	ROOFING & SHEET METAL	25JAN95	14FEB95	21JAN95	10FEB95	-4
.. 111	14	14	0 PR	INSTALL METAL WINDOWS	26JAN95	8FEB95	28JAN95	10FEB95	2
.. 113	56	56	0 SU	AIRCONDITIONING DUCTWORK	15FEB95	11APR95	11FEB95	7APR95	-4
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
.. 77	75	75	0 PR	DELIVER PROTECTION MATERIALS	28OCT94	10JAN95	12DEC94	24FEB95	45
.. 97	18	18	0 PR	CONCRETE TOPPING FILL	29DEC94	15JAN95	7FEB95	24FEB95	40
.. 110*	21	21	0 PR	ROOFING & SHEET METAL	25JAN95	14FEB95	21JAN95	10FEB95	-4
.. 114	42	42	0	INTERIOR PARTITIONS	15FEB95	20MAR95	25FEB95	7APR95	10
.. 120	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
.. 121	14	14	0 SU	PLASTER WALLS	15APR95	28APR95	20APR95	3MAY95	5
.. 122	22	22	0 SU	CERAMIC TILE	15APR95	6MAY95	12APR95	3MAY95	-3
.. 71	30	30	0 PR	DELIVER LATH & PLASTER MATERIALS	28OCT94	26NOV94	23FEB95	24MAR95	118
.. 108*	14	14	0 PR	INSTALL METAL DOORS & ALUMINUM ENTRANCE	18MAR95	31MAR95	11MAR95	24MAR95	-7
.. 110	21	21	0 PR	ROOFING & SHEET METAL	25JAN95	14FEB95	21JAN95	10FEB95	-4
.. 116	14	14	0	STUCCO	1APR95	14APR95	25MAR95	7APR95	-7
.. 120*	14	14	0 SU	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
.. 121*	14	14	0 SU	PLASTER WALLS	15APR95	28APR95	20APR95	3MAY95	5
.. 122*	22	22	0 SU	CERAMIC TILE	15APR95	6MAY95	12APR95	3MAY95	-3
.. 98	63	63	0 PR	ELECTRICAL ROUGH IN	29DEC94	1MAR95	4FEB95	7APR95	37
.. 99	70	70	0 PR	MECHANICAL & PLUMBING ROUGH IN	29DEC94	6MAR95	20JAN95	7APR95	30
.. 113	56	56	0 PR	AIRCONDITIONING DUCTWORK	15FEB95	11APR95	11FEB95	7APR95	-4
.. 114	42	42	0 PR	INTERIOR PARTITIONS	15FEB95	20MAR95	25FEB95	7APR95	10
.. 116*	14	14	0 PR	STUCCO	1APR95	14APR95	25MAR95	7APR95	-7
.. 120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
.. 124*	35	35	0 SU	ACOUSTIC & OTHER CEILINGS	29APR95	2JUN95	27APR95	3MAY95	-2
.. 125*	12	12	0 SU	PLASTER CEILINGS	29APR95	10MAY95	22APR95	3MAY95	-7
.. 114	42	42	0 PR	INTERIOR PARTITIONS	15FEB95	20MAR95	25FEB95	7APR95	10
.. 116*	14	14	0 PR	STUCCO	1APR95	14APR95	25MAR95	7APR95	-7
.. 121	14	14	0	PLASTER WALLS	15APR95	28APR95	20APR95	3MAY95	5
.. 128	17	17	0 SU	TOILET PARTITIONS & ACCESSORIES	7MAY95	23MAY95	17JUL95	2AUG95	71
.. 130	28	28	0 SU	30X PAINT & FINISH	11MAY95	7JUN95	6MAY95	31MAY95	-7
.. 72	45	45	0 PR	DELIVER CERAMIC TILE MATERIAL	28OCT94	11DEC94	26FEB95	11APR95	121
.. 114	42	42	0 PR	INTERIOR PARTITIONS	15FEB95	20MAR95	25FEB95	7APR95	10
.. 116*	14	14	0 PR	STUCCO	1APR95	14APR95	25MAR95	7APR95	-7
.. 122	22	22	0	CERAMIC TILE	15APR95	6MAY95	12APR95	3MAY95	-3
.. 128*	17	17	0 SU	TOILET PARTITIONS & ACCESSORIES	7MAY95	23MAY95	17JUL95	2AUG95	71
.. 130	28	28	0 SU	30X PAINT & FINISH	11MAY95	7JUN95	6MAY95	31MAY95	-7
.. 120*	14	14	0 PR	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
.. 124	35	35	0	ACOUSTIC & OTHER CEILINGS	29APR95	2JUN95	27APR95	31MAY95	-2
.. 139	45	45	0 SU	30X COMPLETE PAINT & FINISH	8JUN95	22JUL95	1JUN95	15JUL95	-7

Figure 6-8 Cont.

31 OCT 97

415-1-4
Oct 97

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 141	30	30	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	8JUN93	7JUL93	27JUN93	26JUL93	19
.. 142	14	14	0 SU	VINYL WALL COVER	8JUN93	21JUN93	20JUL93	24JUL93	42
.. 120*	14	14	0 PR	CEILING SUSPENSION SYSTEM & INSULATION	15APR93	28APR93	8APR93	21APR93	-7
.. 125	12	12	0	PLASTER CEILINGS	29APR93	10MAY93	22APR93	3MAY93	-7
.. 130*	28	28	0 SU	30X PAINT & FINISH	11MAY93	7JUN93	4MAY93	31MAY93	-7
.. 133*	70	70	0 SU	INSTALL MECHANICAL EQUIPMENT	11MAY93	19JUL93	18MAY93	26JUL93	7
.. 73	90	90	0 PR	DELIVER TOILET PARTITIONS & ACCESSORIES	28OCT94	25JAN95	18APR93	16JUL93	172
.. 121	14	14	0 PR	PLASTER WALLS	15APR93	28APR93	20APR93	3MAY93	5
.. 122*	22	22	0 PR	CERAMIC TILE	15APR93	6MAY93	12APR93	3MAY93	-3
.. 128	17	17	0	TOILET PARTITIONS & ACCESSORIES	7MAY93	23MAY93	17JUL93	24JUL93	71
.. 156	7	7	0 SU	CLEAN UP BUILDING	10AUG93	16AUG93	3AUG93	9AUG93	-7
.. 78	45	45	0 PR	DELIVER PAINT MATERIALS	20DEC94	15JAN95	20MAR93	3MAY93	108
.. 121	14	14	0 PR	PLASTER WALLS	15APR93	28APR93	20APR93	3MAY93	5
.. 122	22	22	0 PR	CERAMIC TILE	15APR93	6MAY93	12APR93	3MAY93	-3
.. 125*	12	12	0 PR	PLASTER CEILINGS	29APR93	10MAY93	22APR93	3MAY93	-7
.. 130	28	28	0	30X PAINT & FINISH	11MAY93	7JUN93	4MAY93	31MAY93	-7
.. 139*	45	45	0 SU	50X COMPLETE PAINT & FINISH	8JUN93	22JUL93	1JUN93	15JUL93	-7
.. 140*	42	42	0 SU	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	8JUN93	19JUL93	15JUN93	26JUL93	7
.. 141*	30	30	0 SU	INSTALL PLUMBING FIXTURES & EQUIPMENT	8JUN93	7JUL93	27JUN93	26JUL93	19
.. 142*	14	14	0 SU	VINYL WALL COVER	8JUN93	21JUN93	20JUL93	24JUL93	42
.. 143*	16	16	0 SU	INSTALL 50X MILLWORK	8JUN93	23JUN93	13JUN93	28JUN93	5
.. 144*	21	21	0 SU	INSTALL RESILIENT FLOORS	8JUN93	28JUN93	8JUN93	28JUN93	0
.. 74	150	105	30 PR	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	13SEP94A	9FEB95		17MAY93	97
.. 125*	12	12	0 PR	PLASTER CEILINGS	29APR93	10MAY93	22APR93	3MAY93	-7
.. 133	70	70	0	INSTALL MECHANICAL EQUIPMENT	11MAY93	19JUL93	18MAY93	26JUL93	7
.. 173*	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL93	2AUG93	27JUL93	9AUG93	7
.. 126	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	29APR93	2JUN93	27APR93	31MAY93	-2
.. 130*	28	28	0 PR	30X PAINT & FINISH	11MAY93	7JUN93	4MAY93	31MAY93	-7
.. 139	45	45	0	50X COMPLETE PAINT & FINISH	8JUN93	22JUL93	1JUN93	15JUL93	-7
.. 155*	18	18	0 SU	20X PAINT & FINISH	23JUL93	9AUG93	16JUL93	2AUG93	-7
.. 75	120	60	50 PR	DELIVER ELECTRICAL FIXTURES & EQUIPMENT	29AUG94A	26DEC94		14JUN93	170
.. 130*	28	28	0 PR	30X PAINT & FINISH	11MAY93	7JUN93	4MAY93	31MAY93	-7
.. 140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	8JUN93	19JUL93	15JUN93	26JUL93	7
.. 173*	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL93	2AUG93	27JUL93	9AUG93	7
.. 74	150	105	30 PR	DELIVER PLUMB. FIXTURES & MECH. EQUIP.	13SEP94A	9FEB95		17MAY93	97
.. 124	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	29APR93	2JUN93	27APR93	31MAY93	-2
.. 130*	28	28	0 PR	30X PAINT & FINISH	11MAY93	7JUN93	4MAY93	31MAY93	-7
.. 141	30	30	0	INSTALL PLUMBING FIXTURES & EQUIPMENT	8JUN93	7JUL93	27JUN93	25JUL93	19
.. 173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL93	2AUG93	27JUL93	9AUG93	7

Figure 6-8 Cont.

Mo. Sen Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 13JAN95 RUN NO. 279
13:35

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL95 FIN DATE 14AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 20OCT94 PAGE NO. 7

ACTIVITY ID	ORIG REM			%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
	DUR	DUR	%							
..	79	60	60	0 PR	DELIVER VINYL WALL COVERING	28OCT94	26DEC94	21MAY95	19JUL95	205
..	124	35	35	0 PR	ACOUSTIC & OTHER CEILINGS	29APR95	2JUN95	27APR95	31MAY95	-2
..	130*	28	28	0 PR	30% PAINT & FINISH	11MAY95	7JUN95	6MAY95	31MAY95	-7
..	142	14	14	0	VINYL WALL COVER	8JUN95	21JUN95	20JUL95	2AUG95	42
..	156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
..	80	120	97	53 PR	FABRICATE & DELIVER MILLWORK	26AUG94A	23DEC94		12JUN95	171
..	130*	28	28	0 PR	30% PAINT & FINISH	11MAY95	7JUN95	4MAY95	31MAY95	-7
..	143	16	16	0	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	146*	16	16	0 SU	COMPLETE MILLWORK	24JUN95	9JUL95	30JUN95	15JUL95	6
..	150	3	3	0 SU	GOVERNMENT TEST X-RAY PROTECTION	29JUN95	1JUL95	31JUL95	2AUG95	32
..	151	24	24	0 SU	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11
..	152	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	2AUG95	0
..	153	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	29JUN95	12JUL95	20JUL95	2AUG95	21
..	81	45	30	33 PR	DELIVER RESILIENT FLOOR MATERIALS	13OCT94A	26NOV94		7JUN95	193
..	130*	28	28	0 PR	30% PAINT & FINISH	11MAY95	7JUN95	4MAY95	31MAY95	-7
..	144	21	21	0	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0
..	150*	3	3	0 SU	GOVERNMENT TEST X-RAY PROTECTION	29JUN95	1JUL95	31JUL95	2AUG95	32
..	151*	24	24	0 SU	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11
..	152*	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	2AUG95	0
..	153*	14	14	0 SU	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	29JUN95	12JUL95	20JUL95	2AUG95	21
..	143*	16	16	0 PR	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	146	16	16	0	COMPLETE MILLWORK	24JUN95	9JUL95	30JUN95	15JUL95	6
..	153	18	18	0 SU	20% PAINT & FINISH	23JUL95	9AUG95	16JUL95	2AUG95	-7
..	143	16	16	0 PR	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	144*	21	21	0 PR	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0
..	150	3	3	0	GOVERNMENT TEST X-RAY PROTECTION	29JUN95	1JUL95	31JUL95	2AUG95	32
..	156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
..	82	150	150	0 PR	DELIVER CASEWORK	28OCT94	26MAR95	10FEB95	9JUL95	105
..	143	16	16	0 PR	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	144*	21	21	0 PR	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0
..	151	24	24	0	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11
..	156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
..	83	180	180	0 PR	DELIVER HOSPITAL & MISC. EQUIPMENT	23OEC94	20JUN95	31DEC94	28JUN95	8
..	143	16	16	0 PR	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	144*	21	21	0 PR	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0
..	203	240	237	1 PR	DELIVER GOVT. FURN. HOSP. EQUIP.	25OCT94A	21JUN95		28JUN95	7
..	152	35	35	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	2AUG95	0
..	156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
..	84	90	90	0 PR	DELIVER MISC. BUILDING EQUIPMENT	28OCT94	29JAN95	21APR95	19JUL95	175
..	143	16	16	0 PR	INSTALL 50% MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
..	144*	21	21	0 PR	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0

Figure 6-8 Cont.

REPORT DATE 13JAN95 RUN NO. 279
13:35

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 16AUG95*

SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

DATA DATE 28OCT94 PAGE NO. 8

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
.. 153	14	14	0	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	29JUN95	12JUL95	20JUL95	2AUG95	21
.. 156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
.. 52	73	73	0 PR	DELIVER DOOR CANOPIES & SIGNS	28OCT94	10JAN95	10MAY95	23JUL95	194
.. 103*	27	27	0 PR	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	25JAN95	20FEB95	22
.. 154	10	10	0	INSTALL DOOR CANOPIES & SIGNS	30JAN95	8FEB95	26JUL95	2AUG95	173
.. 156	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
.. 139*	43	43	0 PR	50% COMPLETE PAINT & FINISH	8JUN95	22JUL95	1JUN95	15JUL95	-7
.. 146	16	16	0 PR	COMPLETE MILLWORK	24JUN95	9JUL95	30JUN95	15JUL95	6
.. 155	18	18	0	20% PAINT & FINISH	23JUL95	9AUG95	16JUL95	2AUG95	-7
.. 156*	7	7	0 SU	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
.. 128	17	17	0 PR	TOILET PARTITIONS & ACCESSORIES	7MAY95	23MAY95	17JUL95	2AUG95	71
.. 142	14	14	0 PR	VINYL WALL COVER	8JUN95	21JUN95	20JUL95	2AUG95	42
.. 150	3	3	0 PR	GOVERNMENT TEST X-RAY PROTECTION	29JUN95	1JUL95	31JUL95	2AUG95	32
.. 151	24	24	0 PR	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11
.. 152	35	35	0 PR	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	2AUG95	0
.. 153	14	14	0 PR	INSTALL MISCELLANEOUS BUILDING EQUIPMENT	29JUN95	12JUL95	20JUL95	2AUG95	21
.. 154	10	10	0 PR	INSTALL DOOR CANOPIES & SIGNS	30JAN95	8FEB95	24JUL95	2AUG95	173
.. 155*	18	18	0 PR	20% PAINT & FINISH	23JUL95	9AUG95	16JUL95	2AUG95	-7
.. 156	7	7	0	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
.. 174*	5	5	0 SU	SELL JOB	17AUG95	21AUG95	10AUG95	14AUG95	-7
.. 27*	15	0	100 PR	CONCRETE DESIGN MIX	6JUL94A	21JUL94A			
.. 31*	32	0	100 PR	DEMOLITION & SITE GRADING	18JUL94A	19AUG94A			
.. 48*	13	0	100 PR	DELIVER REINFORCING STEEL	27JUL94A	14AUG94A			
.. 160	60	60	0	DELIVER & INSTALL STORM DRAINA	28OCT94	26DEC94	3MAR95	1MAY95	126
.. 167	42	42	0 SU	SUBGRADE & BASE FOR PAVING	26JAN95	8MAR95	2MAY95	12JUN95	96
.. 31*	32	0	100 PR	DEMOLITION & SITE GRADING	18JUL94A	19AUG94A			
.. 157*	43	0	100 PR	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	23AUG94A	23SEP94A			
.. 161	43	43	0	OUTSIDE PLUMBING	28OCT94	11DEC94	18MAR95	1MAY95	141
.. 167	42	42	0 SU	SUBGRADE & BASE FOR PAVING	26JAN95	8MAR95	2MAY95	12JUN95	96
.. 173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL95	2AUG95	27JUL95	9AUG95	7
.. 31*	32	0	100 PR	DEMOLITION & SITE GRADING	18JUL94A	19AUG94A			
.. 157*	43	0	100 PR	DELIVER OUTSIDE ELEC. & PLUMBING MAT.	23AUG94A	23SEP94A			
.. 162	90	90	0	OUTSIDE ELECTRICAL	28OCT94	25JAN95	1FEB95	1MAY95	96
.. 167*	42	42	0 SU	SUBGRADE & BASE FOR PAVING	26JAN95	8MAR95	2MAY95	12JUN95	96
.. 173	14	14	0 SU	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL95	2AUG95	27JUL95	9AUG95	7
.. 160	60	60	0 PR	DELIVER & INSTALL STORM DRAINA	28OCT94	26DEC94	3MAR95	1MAY95	126
.. 161	43	43	0 PR	OUTSIDE PLUMBING	28OCT94	11DEC94	18MAR95	1MAY95	141
.. 162*	90	90	0 PR	OUTSIDE ELECTRICAL	28OCT94	25JAN95	1FEB95	1MAY95	96
.. 167	42	42	0	SUBGRADE & BASE FOR PAVING	26JAN95	8MAR95	2MAY95	12JUN95	96
.. 168*	21	21	0 SU	CURB & GUTTER	9MAR95	29MAR95	13JUN95	3JUL95	96

Figure 6-8 Cont.

415-1-4
31 Oct 97

Joy, een Construction Company

PRIMAVERA PROJECT PLANNER

DA DISPENSARY, LACKLAND AFB, TEXAS

REPORT DATE 13JAN95 RUN NO. 279
13:35
SCHEDULE REPORT - DETAILED PRECEDENCE ANALYSIS

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

START DATE 1JUL94 FIN DATE 14AUG95
DATA DATE 28OCT94 PAGE NO. 9

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL
									FLOAT
.. 167*	42	42	0 PR	SUBGRADE & BASE FOR PAVING	26JAN95	0MAR95	2MAY95	12JUN95	96
.. 168	21	21	0	CURB & GUTTER	9MAR95	29MAR95	13JUN95	3JUL95	96
.. 169*	21	21	0 SU	SIDEWALKS	30MAR95	19APR95	4JUL95	24JUL95	96
.. 170*	10	10	0 SU	ASPHALT PAVING	30MAR95	8APR95	15JUL95	24JUL95	107
.. 168*	21	21	0 PR	CURB & GUTTER	9MAR95	29MAR95	13JUN95	3JUL95	96
.. 169	21	21	0	SIDEWALKS	30MAR95	19APR95	4JUL95	24JUL95	96
.. 172*	16	16	0 SU	TOPSOIL & FINE GRADING	20APR95	5MAY95	25JUL95	9AUG95	96
.. 168*	21	21	0 PR	CURB & GUTTER	9MAR95	29MAR95	13JUN95	3JUL95	96
.. 170	10	10	0	ASPHALT PAVING	30MAR95	8APR95	15JUL95	24JUL95	107
.. 172	16	16	0 SU	TOPSOIL & FINE GRADING	20APR95	5MAY95	25JUL95	9AUG95	96
.. 103	27	27	0 PR	EXTERIOR MASONRY WALLS	3JAN95	29JAN95	29JAN95	20FEB95	22
.. 169*	21	21	0 PR	SIDEWALKS	30MAR95	19APR95	4JUL95	24JUL95	96
.. 170	10	10	0 PR	ASPHALT PAVING	30MAR95	8APR95	15JUL95	24JUL95	107
.. 172	16	16	0	TOPSOIL & FINE GRADING	20APR95	5MAY95	25JUL95	9AUG95	96
.. 174	5	5	0 SU	SELL JOB	17AUG95	21AUG95	10AUG95	14AUG95	-7
.. 133*	70	70	0 PR	INSTALL MECHANICAL EQUIPMENT	11MAY95	19JUL95	18MAY95	26JUL95	7
.. 140*	42	42	0 PR	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	8JUN95	19JUL95	15JUN95	26JUL95	7
.. 141	30	30	0 PR	INSTALL PLUMBING FIXTURES & EQUIPMENT	8JUN95	7JUL95	27JUN95	26JUL95	19
.. 161	45	45	0 PR	OUTSIDE PLUMBING	20OCT94	11DEC94	18MAY95	1MAY95	141
.. 162	90	90	0 PR	OUTSIDE ELECTRICAL	20OCT94	25JAN95	1FEB95	1MAY95	96
.. 173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL95	2AUG95	27JUL95	9AUG95	7
.. 174	5	5	0 SU	SELL JOB	17AUG95	21AUG95	10AUG95	14AUG95	-7
.. 156*	7	7	0 PR	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
.. 172	16	16	0 PR	TOPSOIL & FINE GRADING	20APR95	5MAY95	25JUL95	9AUG95	96
.. 173	14	14	0 PR	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL95	2AUG95	27JUL95	9AUG95	7
.. 174	5	5	0	SELL JOB	17AUG95	21AUG95	10AUG95	14AUG95	-7
.. 201*	25	0	100 PR	NEG. CHANGE ORDER NO. 1	29SEP94A	23OCT94A			
.. 202	30	26	13	RESUB. HOSP. & MISC. EQUIP.	24OCT94A	22NOV94			
.. 58*	30	30	0 SU	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	1DEC94	30NOV94	8
.. 201*	25	0	100 PR	NEG. CHANGE ORDER NO. 1	29SEP94A	23OCT94A			
.. 203	260	237	1	DELIVER GOVT. FURN. HOSP. EQUIP.	25OCT94A	21JUN95			
.. 152	35	35	0 SU	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	28JUN95	7
									0

Figure 6-8 Cont.

31 Oct 97

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
40	30	21	30	GOVERNMENT APPROVE BUILDER'S H	19OCT94A	17NOV94		10NOV94	-7
69	120	120	0	DELIVER BUILDER'S HARDWARE	18NOV94	17MAR95	11NOV94	10MAR95	-7
100	14	14	0	INSTALL METAL DOORS & ALUMINUM ENTRANCE	18MAR95	31MAR95	11MAR95	24MAR95	-7
116	14	14	0	STUCCO	1APR95	14APR95	25MAR95	7APR95	-7
120	14	14	0	CEILING SUSPENSION SYSTEM & INSULATION	15APR95	28APR95	8APR95	21APR95	-7
123	12	12	0	PLASTER CEILINGS	29APR95	10MAY95	22APR95	3MAY95	-7
130	28	28	0	30% PAINT & FINISH	11MAY95	7JUN95	4MAY95	31MAY95	-7
139	45	45	0	50% COMPLETE PAINT & FINISH	8JUN95	22JUL95	1JUN95	15JUL95	-7
155	18	18	0	20% PAINT & FINISH	23JUL95	9AUG95	16JUL95	24AUG95	-7
156	7	7	0	CLEAN UP BUILDING	10AUG95	16AUG95	3AUG95	9AUG95	-7
174	5	5	0	SELL JOB	17AUG95	21AUG95	10AUG95	16AUG95	-7
93	20	12	60	30% UNDERFLOOR MECH. & ELEC. R	20OCT94A	8NOV94		4NOV94	-4
94	50	50	0	FORM, PLACE, & CURE PAV SLABS & BEAMS	9NOV94	28DEC94	5NOV94	24DEC94	-4
95	50	50	0	70% UNDERFLOOR MECH. & ELEC. R	9NOV94	28DEC94	5NOV94	24DEC94	-4
100	9	9	0	ERECT STEEL COLUMNS & METAL DUCKS	29DEC94	2JAN95	29DEC94	29DEC94	-4
102	10	10	0	ERECT STRUCTURAL STEEL & JOISTS	3JAN95	12JAN95	30DEC94	8JAN95	-4
109	12	12	0	INSTALL ROOF DECK	13JAN95	24JAN95	9JAN95	20JAN95	-4
110	21	21	0	ROOFING & SHEET METAL	25JAN95	14FEB95	21JAN95	10FEB95	-4
113	56	56	0	AIRCONDITIONING DUCTWORK	15FEB95	11APR95	11FEB95	7APR95	-4
122	22	22	0	CERAMIC TILE	15APR95	6MAY95	12APR95	3MAY95	-3
124	35	35	0	ACOUSTIC & OTHER CEILINGS	29APR95	2JUN95	27APR95	31MAY95	-2
144	21	21	0	INSTALL RESILIENT FLOORS	8JUN95	28JUN95	8JUN95	28JUN95	0
152	35	35	0	INSTALL HOSPITAL & MISCELLANEOUS EQUIPMENT	29JUN95	2AUG95	29JUN95	2AUG95	0
68	90	90	0	FABRICATE & DELIVER METAL WINDOWS	28OCT94	29JAN95	30OCT94	27JAN95	2

Figure 6-9

Jy. Len Construction Company

REPORT DATE 13JAN95 RUN NO. 276
13:30
TOTAL FLOAT LESS THAN 14 DAYS

PRIMAVERA PROJECT

PRIMAVERA PROJECT PLANNER PRECEDENCE REPORT

DA DISPENSARY, LACKLAND AFB, TEXAS

START DATE 1JUL95 FIN DATE 14AUG95
DATA DATE 28OCT95 PAGE NO. 2

ACTIVITY ID	ORIG DUR	REM DUR	%	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	LATE START	LATE FINISH	TOTAL FLOAT
111	14	14	0	INSTALL METAL WINDOWS	26JAN95	0FEB95	28JAN95	10FEB95	2
121	14	14	0	PLASTER WALLS	15APR95	28APR95	20APR95	3MAY95	5
143	16	16	0	INSTALL SOX MILLWORK	8JUN95	23JUN95	13JUN95	28JUN95	5
146	16	16	0	COMPLETE MILLWORK	24JUN95	9JUL95	30JUN95	15JUL95	6
203	240	237	1	DELIVER GOVT. FURN. HOSP. EQUIP.	25OCT94A	21JUN95		28JUN95	7
133	70	70	0	INSTALL MECHANICAL EQUIPMENT	11MAY95	19JUL95	18MAY95	26JUL95	7
140	42	42	0	INSTALL ELECTRICAL FIXTURES & EQUIPMENT	8JUN95	19JUL95	13JUN95	26JUL95	7
173	14	14	0	TEST MECHANICAL & ELECTRICAL EQUIPMENT	20JUL95	2AUG95	27JUL95	9AUG95	7
202	30	26	13	RESUB. HOSP. & MISC. EQUIP.	24OCT94A	22NOV94		30NOV94	6
58	30	30	0	GOVERNMENT APPROVE HOSPITAL &	23NOV94	22DEC94	10DEC94	30DEC94	8
83	180	180	0	DELIVER HOSPITAL & MISC. EQUIPMENT	23DEC94	20JUN95	31DEC94	28JUN95	8
114	42	42	0	INTERIOR PARTITIONS	15FEB95	28MAR95	25FEB95	7APR95	10
131	24	24	0	INSTALL CASEWORK	29JUN95	22JUL95	10JUL95	2AUG95	11

6-25

Figure 6-9 Cont.

CHAPTER 7

ARROW DIAGRAMMING SYSTEM

7-1. Arrow Diagramming.

a. Activities. The activities from the project breakdown are shown as arrows. An arrow on the diagram represents an activity requiring time flowing from the tail to the head of the arrow (Figure 7-1). The description of the activity is usually shown above the arrow. The arrow can be drawn in any direction; however, the conventional flow is from left to right. Durations are estimated just as in the Precedence system and are usually shown below the arrow.

b. Events. Any time period must begin at some point in time and end at some point in time. These points in time are called "events" or nodes and are shown as circles on the diagram. There must be an event, or node, at each end of an arrow (Figure 7-2). Each activity can start at only one event and end at one other event.

c. Logic Diagramming. Activities recorded on the diagram are interrelated through the events using the same considerations as in the Precedence system. An event can be the end point for one or more activities as well as the start point for others. Figure 7-3 indicates that "B" cannot be started until "A" is finished. Any two or more activities which can be started at the same point in time (Figure 7-4) or finished at the same point in time, (Figure 7-5), are said to be concurrent or parallel. In Figures 7-4 and 7-5, "C", and "D" are concurrent or parallel activities and "E" and "F" are concurrent or parallel. If "C" and "E" are in sequence and "D" and "F" are also in sequence, the path "CE" is parallel or concurrent with "DF" as shown in Figure 7-6.

d. Restraints/Dummy Activities. When two or more activities must be finished before another activity can be started, the restraining activities must terminate together at the event from which the succeeding activity begins. Figure 7-7 shows that "P" cannot start until both "M" and "N" are finished. If another activity "R" is introduced and is restrained by "N" only, "R" could not be shown starting from the common event without indicating a false restraint by "M". A restraint or dummy activity, shown as a dashed arrow, is used which indicates flow of dependency but not time or work. A restraint is quite similar to the arrows

used in Precedence. In Figure 7-8 the start of activity P continues to depend on the completion of both activities M and N while the start of activity R is restrained only by the completion of activity N. A restraint normally has 0 duration.

e. Activities are identified which will reveal the logic developed on the diagram. This is easily done by assigning numbers to the events on the arrow diagram. An activity then can be identified by the combination of the initial (i) event number at the tail of the arrow and the terminal junction (j) node at the head, the i-j number serving to identify the activity. Unlike the Precedence system, this numbering should be done sequentially with the (j) event number always higher than the (i) number. Such numbering avoids logic errors called loops. Also the i-j number for each activity should be unique to that activity. At times a numbering dummy is inserted to accomplish this, when two activities would otherwise have the same i and j event numbers (See Figures 7-10 & 7-11). It is a good idea to skip numbers in a network to allow for adding logic without violating the numbering system.

7-2. Analysis. The breakdown of a project, development of logic, and estimates of duration times for individual activities can be done manually or using a computer. Analysis is normally accomplished by computer once the logic and durations are entered. The management data which results from the analysis in the Arrow diagramming system is very similar to that obtained in the Precedence system. There are some differences such as the logic can be understood from the (i) (j) listing and no predecessor-successor report is needed. There are Early Event Times and Late Event Times distinct from the Early and Late Starts and Finishes. Some of these are identical and some are not. The Arrow system does not have the Start-to-Start and Finish-to-Finish features of the Precedence system so, to duplicate this logic, activities must be broken into more detail. Dummies, used in logic development, should be erased from working reports where they serve no purpose but they should be retained in the i-j and the total float reports. The Critical Path consists of a chain of activities with 0 float. It may contain dummies.

DESCRIPTION →

Figure 7-1
Activity



Figure 7-2
Events or Nodes



Figure 7-3
Activities in Sequence

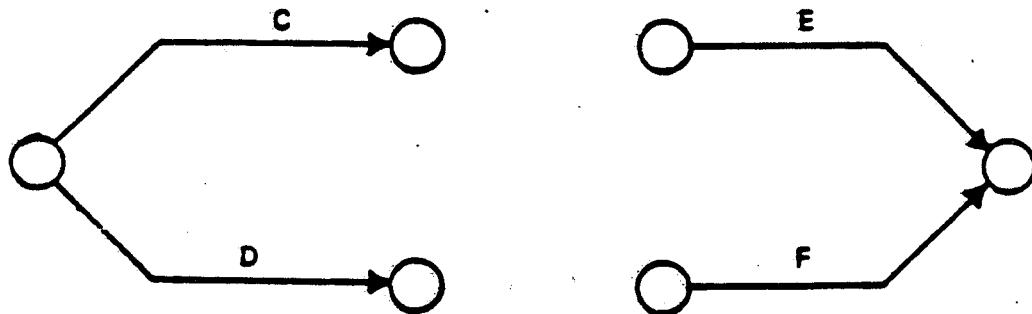


Figure 7-4
Concurrent or Parallel Activities

Figure 7-5

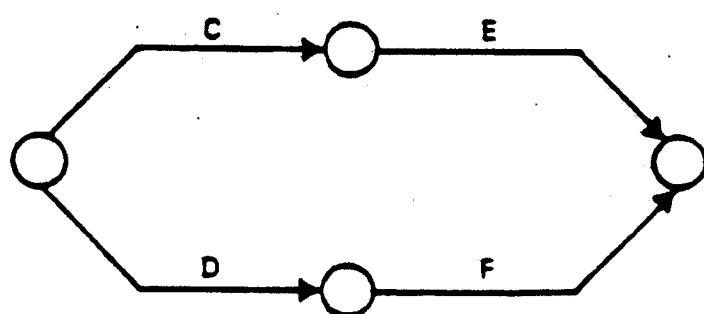


Figure 7-6
Concurrent or Parallel Paths

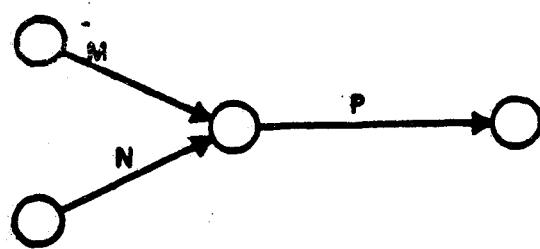


Figure 7-7
Two Activities Restraining One Activity

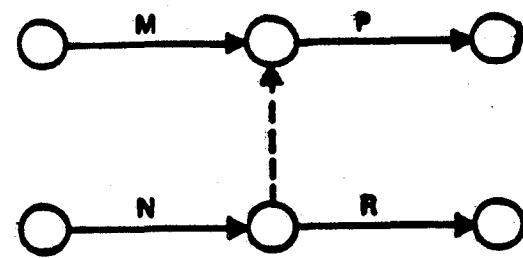


Figure 7-8
The Logic Dummy

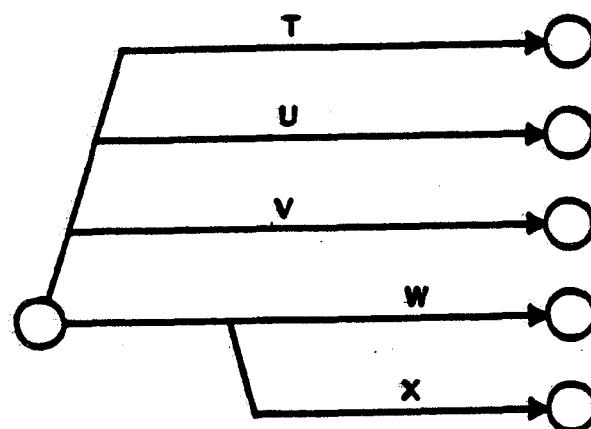


Figure 7-9
Common Lines - Separate Activities

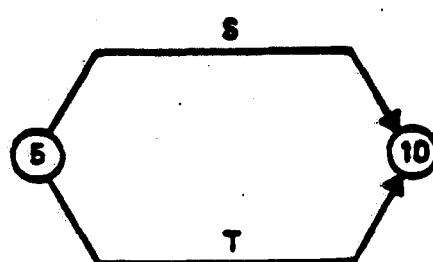


Figure 7-10
The Numbering Dummy

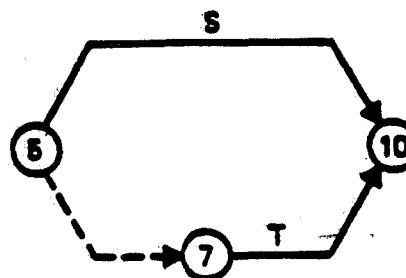


Figure 7-11

CHAPTER 8

SUMMARY

Summary. The above information is intended as a basic introduction to Network Analysis Systems. The figures are examples of the software scheduling programs which are on the market. All systems depend on accurate input schedule information. Once that is obtained, valuable information can be derived from the analysis. Examples have been included of management computer sorts which will be of different value for different managers. Other sorts and presentations are available or a specific report can be designed by the user. Each user must determine what information he/she needs and specify only that required. Techniques such as shortened versions of certain sorts are recommended in order to limit the volume of each report. Current software allows the design of almost any kind of data arrangement desired. The computer reports, if based on accurate input data, will project completion and display the causes of delay if the project is behind schedule. The manager can then use this information to decide on the most appropriate course of action under the contract. NAS schedules, properly used, can be a definite aid in executing the Government's responsibilities under a contract and requiring the contractor to execute his or her responsibility.

a. When the Work is Changed. It is very important that the logic diagram be revised to reflect any appropriate revisions of logic, restraints, new or deleted activities, revised durations, and monetary values. With progress data posted as of the next update the impact of these changes on the project can be evaluated. The determination of impact on time and money should be made concurrently; it must consider the status of the project at the time the change occurs; and it must not be delayed for later determination.

b. Time Scaled Diagrams. Network Diagrams can be constructed to a horizontal time scale. This is favored by some who see benefit in the visibility afforded by such a method. A vertical line representing the current date can be drawn and analysis made on whether posted progress is left or right, of the line. This is often a good briefing technique on a summary diagram. Also numerous computer plotting systems will generate time scaled and bar chart diagrams from the schedule information. These may be useful tools for briefing purposes. However, basic information necessary for project management should be obtained from the standard computer printouts illustrated previously.