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THE WORK REQUEST SYSTEM

A NASA Q1 PACKAGE

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I. OVERVIEW

THE WORK REQUEST SYSTEM
A NASA Q1 PACKAGE

The agency has available a computer package for tracking work requests and purchase orders (or contracts). The package runs on the Q1 equipment already installed at every center.

The system can be used to track any type of work which is controlled on the basis of work requests and purchase orders/contracts. It can handle about 1,200 work requests per year. At Goddard, where the system was developed, the Facilities Engineering Division uses it primarily to track work that goes to their unit price contractor. The value of the work requests ranges from a few dollars to upwards of $100,000.

Milestones tracked include:

- Date of the work request
- Date the work request was received
- Date sent to be designed
- Date assigned to an engineer
- Estimated date from design
- Actual date received from design
- Dates to and from Accounting (for verification of funds)
- Dates to and from Procurement
- Date of purchase order or contract
- Construction start and end dates.

In addition to these schedule milestones, the system records various identification data, such as:

- The requestor
- The work request number and a description of the work
- The purchase request number
- The purchase order or contract number
- The name of the contractor.

The system also records certain cost data:

- The original estimate for the job
- The purchase request amount
- The contract or purchase order amount
- The amount invoiced
- The amount paid.

1. WHAT THE SYSTEM AS A WHOLE DOES

- It tracks the status of every work request and purchase order

- It provides summary and performance reports for management. For instance, the Q1 will show the average time spent in design or in Procurement, as well as trends. Are things getting better or are they getting worse?

- The work request system makes good management discipline easier. People at all levels support the system because it gives each of them something that he needs.

2. STATUS TRACKING

Tracking work requests and purchase orders gives several advantages:

1) Nothing Gets Lost -- not in design, not in procurement, not waiting for matierials, not anywhere. You don't have to answer any more embarrassing questions about that 3-month old job for $1,500 that was last seen the day it got logged into your department.

2) You Can Answer Status Queries -- both for your customers and for yourself. As one division head at Goddard remarked after they put in this system, "You guys never used to tell us anything; now we know what's happening on our jobs."

   In addition, customers will call less often if they receive status reports, if their questions are answered the first time, and if their jobs appear to be under control.

3) Everyone Has a Checklist of His Jobs. At Goddard, the Q1 gives every engineer in the Facilities Engineering Division a list of his jobs showing what they are, when they're due, and so on. These lists have been tremendously valuable to the engineers, which is why the engineers support the system and help to keep it current.

The supervisors get similar lists. Every second week when the Q1 printouts come out, every engineer will sit down with his supervisor and go over the jobs for which he is responsible. This joint review can be as short or as long as necessary, but it provides a mechanism where:

- Forgotten jobs get remembered
- Problems are surfaced
- Delays of all kinds are noticed
- Both supervisor and engineer understand their priorities and the work to be done next.

3. SUMMARY AND PERFORMANCE INFORMATION

It is important that somebody be on top of each job, but a department head needs summary information. He can also use performance information if he can get it. The work request system provides both.

1) Summary Information

Figure 1 shows a typical summary report. It shows the number of jobs that have been designed but have not yet been put on a purchase order or contract. As a manager, you may be interested in knowing that more than a quarter of your jobs have been in Procurement for more than 30 days.

2) Performance Information

Figure 2 shows a trend chart that Goddard updates every month based on data points produced by the Q1. This chart shows the average length of time that jobs spend in design, month by month, last year and this year. Similar trend charts are available for:

- Overall processing time -- from when the work request arrives to when the job is done.

- Time required for a work request to reach the facilities department. (Date of receipt less date of the work request.) If this time starts to increase, then:

  --The facilities department will know that there is a problem

  --The department will have the evidence with which to convince other people that there's a problem (and that it isn't within the facilities department).

4. GOOD MANAGEMENT MADE EASY

As noted, the work request system offers three advantages:

- Status tracking
- Summary and performance information for management
- Good management procedures.

Obviously it is people, not computers, that make good management. But having a work request system such as this one makes good management discipline easier.

- First, there is a place for everything, so people tend to be more organized. For instance, everyone is in agreement on what constitutes "completion of a work request".

- Second, things never get too far out of hand. Jobs do not get lost; deadlines do not sneak up on you; delays are spotted early. In other words, the computer helps you stay organized so that you are not forever having to get organized.

- Most importantly, with the Q1 everybody gets rewarded for good management discipline. There's something in it for everybody. The project engineers get up-to-date lists of their jobs and when they're due. This makes the project engineers happy. Management gets performance information and early warning on problems. Overall, the department looks good because it can answer its customers' questions.

Experience has shown that every computer system must reward the people who feed it. If the benefits all go one way -- if the people who must supply the inputs get nothing from the system -- then the system sill work only grudgingly. The work order system was designed with this lesson in mind. It works because everybody benefits.

5. THE WORK REQUEST SYSTEM IS FULLY DEVELOPED AND AVAILABLE

- This work request system was one of the first Q1 applications in NASA. It has been up and running at Goddard since July of 1978. It is fully developed.

- The people at Goddard are very pleased with it.

- It will run on any NASA Q1, using floppy disks only. No new equipment is needed.

- Some program changes will have to be made to suit your needs -- all the reports for instance, say "Goddard Space Flight Center". Further, if the set of milestones which the system tracks does not correspond to the milestones at your center, then program adjustments will have to be made.

If the work request system interests you, you should get in touch with Jim Weir at NASA Headquarters, extension 5-3285.

FIGURE 1

Sample Summary Report

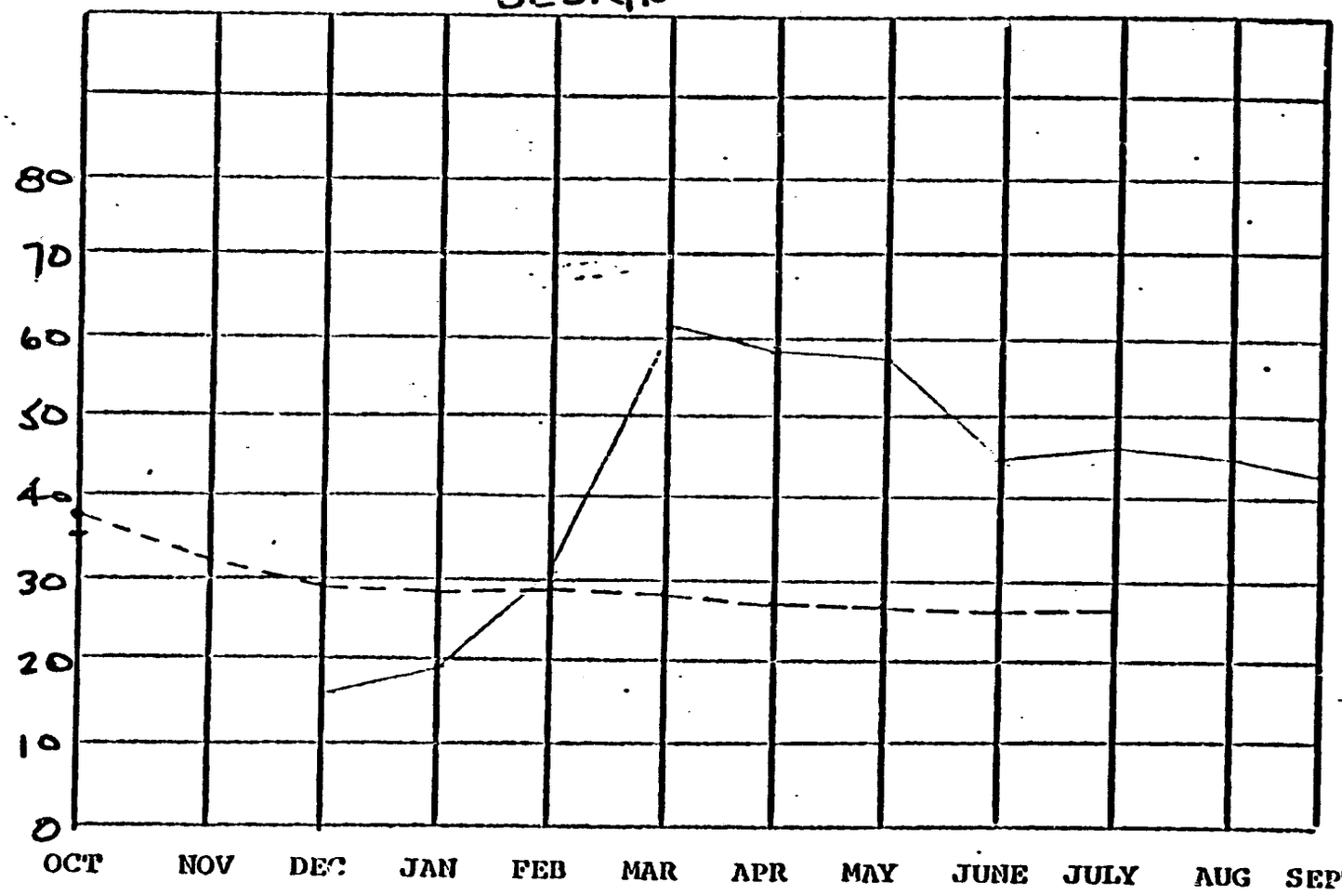
WORK REQUEST SYSTEM · FACILITIES ENGINEERING DIVISION — PROGRAM WRSMR2
SUMMARY OF PR"S ISSUED BUT NO DO OR PO AWARDED — DATE 04/06/79

AGE IN DAYS	# PR"S
0-30	52
31-60	6
61-90	9
91-120	2
> 120	3
TOTAL	72
% > 30 DAYS	27

WORK REQUEST SYSTEM

AVERAGE PROCESSING TIME -- 3 MONTH ACCUMULATION

DESIGN



FY 78 ——			16.0	19.0	30.4	61.1	58.1	57.7	44.3	46.9	44.5	42.5
FY 79 - - -	37.7	32.2	29.9	28.1	28.9	28.8	26.7	26.3	26.1	26.3		

FIGURE 2
Sample Trend Chart

II. DETAILS OF THE WORK REQUEST SYSTEM

This section presents the details of the computer system and of the management practices which it supports.

1. WHAT THE SYSTEM TRACKS

1) The Kinds of Jobs

The work request system can track any kind of job as long as the work is controlled by a work request or some similar piece of paper that is one-for-one with the job. If you subdivide your jobs into work packages, the system will be a poor fit for you. It will treat each of the work packages as a separate job, and subtotals at the job level will not be available. In other words, the system assumes a flat arrangement of jobs, not a hierarchical one.

Goddard uses the system to track those jobs which are assigned to its unit price contractor, the J.H. Lawrence Co. The jobs range from a few dollars to many thousands. Goddard tracks CoF projects with the FPDS system, not with this work request system, unless a CoF project or portion thereof is accomplished thorugh the unit price contractor.

The pieces of paper that are tracked include:

- Work requests
- Associated procurement requests
- Associated delivery orders to the unit price contractor (or separate purchase orders)
- Associated final invoices.

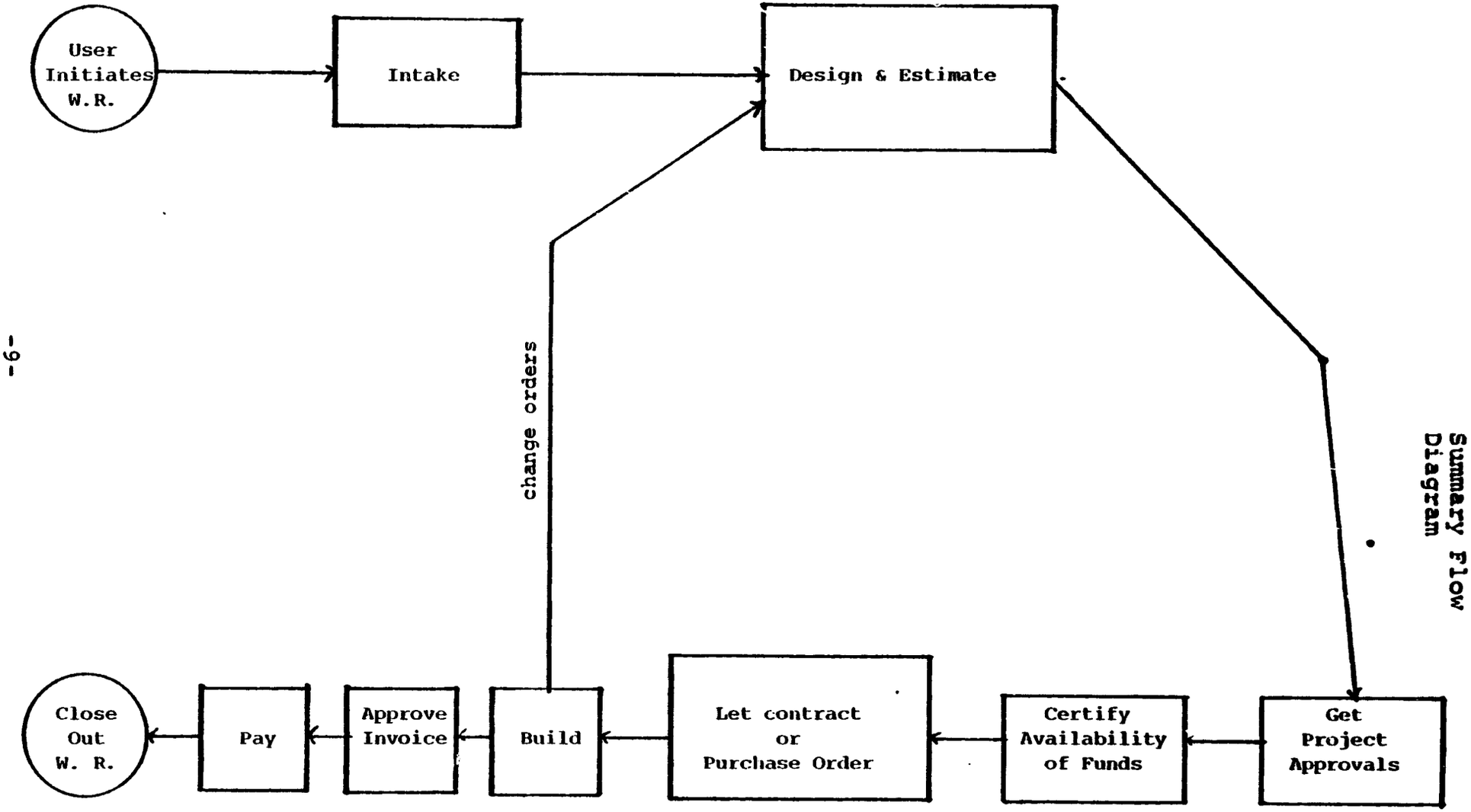
2) The Milestones that Are Tracked

Figure 3 shows the flow of work for which the system was designed. Figure 4 shows the same flow in more detail. This flow -- Goddard's management system -- dictated the milestones and the data to be collected.

The system can be easily adapted to track different or fewer events. If you need to increase the number of events tracked, then the reprogramming costs rise considerably. However, the system already tracks an extensive set of events.

WORK REQUEST SYSTEM AT GODDARD

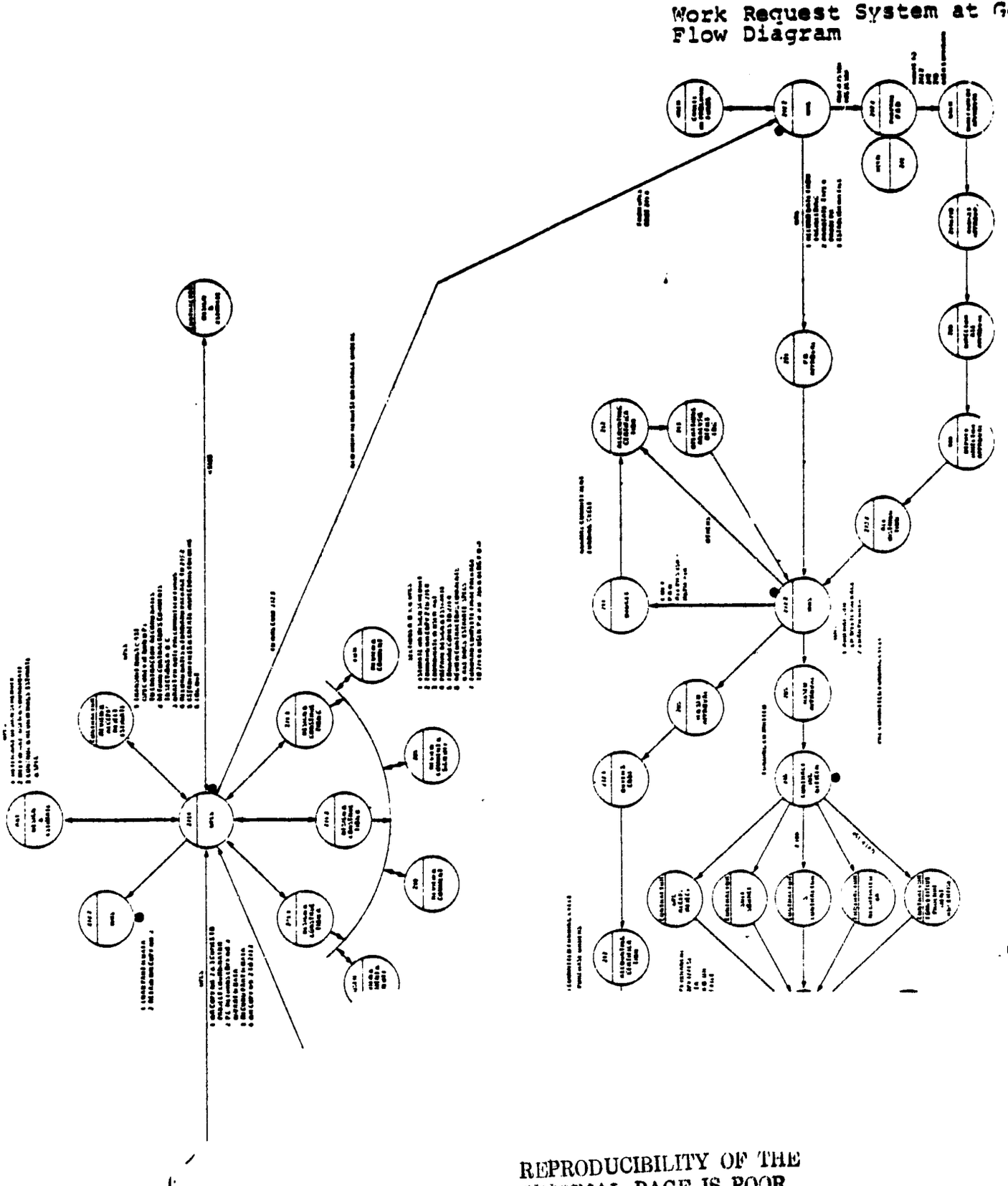
SUMMARY FLOW DIAGRAM



Summary Flow Diagram

FIGURE 4

Work Request System at Goddard, Flow Diagram



3) The Data Collected

Figure 5 shows the full set of data that the system collects on each work request. Most of these items are optional. For instance, if reports concerning the dates to and from accounting are not desired, then those dates need not be entered.

Note these design features regarding the data collected:

- Milestone Data Are Featured. Milestone data are the heart of the system -- the dates when the work request passed various points in its life.

- Selected Financial Data Are Collected. The system tracks five costs:

  --The original estimated cost
  --The purchase request amount
  --The contract (purchase order or delivery order) amount
  --The amount invoiced
  --The amount paid

  Space is also provided for the cost account category (called the "job order number" at Goddard), the fund source and the fund year.

  Goddard uses these financial entries as an unofficial but quick reference as to the cost of jobs. The system uses the information to categorize the jobs by cost in various reports.

- Manhour Data Are Not Collected. The system does not concern itself with manhours, either estimated or actual. While such data could be collected in place of some other data element, the system provides no facility to add up and display these hours in the ways which are usually desired.

  Furthermore, manhour information (such as total shop backlog) usually requires that all work in the organization be in the system. Work requests usually represent only part of the workload. Thus, if a program to track manhours is desired, the work request system is probably not a good choice.

FACILITIES ENGINEERING DIVISION - WORK REQUEST DATA SHEET 06/04/79 PROGRAM: WRSPRT

WORK REQUEST NUMBER:	4402
DATE RECEIVED:	05/04/76
ORIGINATOR CODE:	950
ORIG. REQUEST NO:	7608
DATE OF REQUEST:	04/22/76
DESCRIPTION:	INSTL POWER WATER DR
BUILDING NUMBERS:	019
ROOM NUMBERS:	002
PROJECT COORDINATOR:	WAB
ESTIMATED DESIGN START:	05/04/76
ESTIMATED DESIGN COMPLETION:	03/04/77
DATE FROM ENGINEERING:	03/04/77
ESTIMATED COST:	$8,773.13
ACTUAL DESIGN COMPLETION:	03/04/77
DATE TO PAD:	
DATE FROM PAD:	
CONTRACTOR NAME:	
APPROPRIATION TITLE:	IMS
JOB ORDER NUMBER:	950-992-54-01-01
FISCAL YEAR:	7T
P R AMOUNT:	$8,334.27
PROCUREMENT CONTROL NO:	07,583
PCN DATE:	05/13/77
DATE TO ACCOUNTING:	05/15/77
DATE FROM ACCOUNTING:	05/20/77
DATE TO PROCUREMENT:	09/25/78
DELIVERY ORDER NO:	2596
DATE OF PO/DO:	09/28/78
PURCHASE ORDER NUMBER:	
PO/DO AMOUNT:	$4,924.33
ACTUAL CONST START:	10/23/78
DATE ACTUAL CONST COMPLETE:	
INVOICE AMOUNT:	$0.00
PAID INVOICE AMOUNT:	$0.00
COMMENTS:	60% COMPLETE 051679
NUMBER OF AMENDMENTS:	02
DATE RECORD CREATED:	
LAST E/M DATE:	05/17/79
SAFETY	

NOTE: This printout shows the full set of data which is collected on each work request.

FIGURE 5
Data Collected by the System

4) Retention of Data

Periodically, the operator runs a program which transfers inactive work requests from the active to the inactive file. They then no longer appear on the standard reports which the system prepares.

Goddard policy is to run this transfer program monthly after the monthly reports have been produced. The effect is that work requests will appear on the monthly reports until they are complete (or cancelled). Then they will appear on one monthly report as complete (or cancelled). Then they disappear from the reports.

Data on inactive work requests is kept as long as desired.

2. HOW THE SYSTEM WORKS AT GODDARD

In order to clarify the features of the work request system, this section shows how Goddard uses it.

1) Goddard Holds Bi-Weekly Management Reviews

Every other week, the Q1 prints reports for use within the Facilities Engineering Division. These show, by engineer, the status of all work requests. Each engineer then sits down with his supervisor and reviews his work.

2) External Reports Are Printed Monthly

Every month, the Q1 prints reports that are sent to the various customer directorates and their divisions. These list the work requests from those organizations and their status.

Certain perfcrmance reports are also run monthly. From these, an analyst updates the trend charts such as the one in Figure 2 on page 7.

3) Inputs Are Batched

Several people at Goddard enter data into the Q1 as part of the system; there is no full-time data-entry person. The usual pattern is as follows:

- A person will process the work request or associated document
- The person will record the action in pen and ink on a printout
- At a later time, the person will go to the Q1 and enter the pen and ink markups into the data base.

A computer person would say that the inputs at Goddard are not done in "real time", as-you-go, but instead are "batched".

Since inputting is batched, the data in the computer is likely to be running several days behind events. This means that the source of up-to-the-minute status information is the annotated printouts kept by the various people who process work requests.

Goddard finds that this batch method of using the system best meets its needs in that:

- The annotated printouts provide an audit trail which would not be available if people input directly from the various documents in passing.
- The computer system is such that it is easier to make several entries at once than to go to the Q1 each time a document is processed.
- An up-to-the-minute data base is not needed. Goddard takes care that the data base is brought up to date before the bi-weekly reports are run. Other than that, Goddard has no need for more timely information.

4) Status Queries Are Answered from Printouts

Goddard answers status queries by reference to the annotated printouts that various people maintain. The Q1 aids this process by providing up-to-date and sorted reports every two weeks. Goddard has found that the annotated printouts are a more convenient source of information than the Q1 terminal itself, even if the Q1 data base were as up to date as the printouts, which it is not.

5) At Goddard, the System Requires Half a Man-Year

Goddard assigns no one to operate the work request system full time. Instead, the clerical people who normally process work orders, purchase requests, and so on, all operate the Q1 part time. A rough estimate of the total manpower expended is half a man-year.

A few tasks are now done automatically which were formerly done manually. However, the benefits of the system are not in manpower savings but in better control of the work and better management information.

3. REPORTS PRODUCED BY THE SYSTEM

Figure 6 is the index of the Operator's Manual for the system. It shows all of the programs that are available, among them the report-writing programs, according to this key:

R = Report-writing program
I = Data inputting/updating program
H = Housekeeping program

FIGURE 6
Index of Programs

INDEX OF PROGRAMS

PROGRAM	PAGE #	PROGRAM FUNCTION	
WRSCK1	10	Performs the sequence checks on Work Request Numbers.	H
WRSCMP	12	Lists Work Requests with variances between Delivery Order or Purchase Order Amount and the Procurement Request Amount.	R
WRSDCR1,2	13	Extracts information from the active (WRSDATA) and the inactive (WRSHIST) master file and print a Cross Reference of Work Request and Delivery Order Numbers.	R
WRSDIREC	15	Prints a directory of all work request control numbers on either active (WRSDATA) or (WRSHIST) master files in ascending order.	H
WRSDUMP	16	Prints a complete listing of every field element on the desired input file in 4 segments.	R,H
WRSEDIT & WRSEPRT	19	Edit Analysis Program - - examines every field of data within each record for errors, and prints only those records with errors.	H
WRSER1	21	~~Prints~~ Lists Work Requests by building and room number.	R
WRSFM10	23	Program for adding a Work Request to the Master File.	I
WRSFM20-50	25	Program for changing or adding to an existing Work Request Number.	I
WRSFOG1, WRSMR1	27	Lists work requests in design, followed by a summary by age in days.	R
WRSFOG3, WRSMR2	29	List procurement requests issued by not contractually awarded, followed by a summary by age in days.	R
WRSFOG4, WRSMR3	30	Lists work requests back from design but no procurement request issued, followed by summary by age in days.	R
WRSFOG5, WRSMR4	31	Lists work requests with delivery orders or purchase orders and construction not yet completed, followed by a summary by age in days.	R
WRSFOG6, WRSMR5	32	Prints work requests completed but no final payment made, followed by age in days.	R
WRSFOG7,8	33	Prints WRSFOG5 information in Delivery Order number sequence.	R
WRSLMCP	34	Printing of PCN of Engineering date from last month.	R

KEY:
R = Report program
I = Input/update program
H = Housekeeping program

INDEX OF PROGRAMS

PROGRAM	PAGE #	PROGRAM FUNCTION	
WRSLS3	35	Prints a load sheet for various data elements.	R
WRSMER2, WRSTRK30, WRSTRK35	37	Prints the average processing time for delivery orders.	R
WRSMERG	36	Merges the master and history files.	H
WRSMOD10	40	Program creates "Change Order" to the basic work request.	I
WRSMRG4	42	Program transfers records from the inactive file back to the active file.	H
WRSPOR1	45	Lists purchase orders in ascending order.	R
WRSPRL1,2	46	Lists procurement controls numbers in chronological order.	R
WRSPR1,2	48	Lists a range of procurement control numbers in chronological order.	R
WRSPRT	49	Print File Program - - this program prints in a format called a "Data Sheet". It can print one, all, or a range of work request control numbers from your choice of file names (WRSDATA, WRSHIST, WRSWORK, etc.).	R
WRSSR1,2	51	Extracts information from the active master file (WRSDATA) and sorts it to produce a user's status report.	R
WRSSR3,4	54	Prints a status report in organization code sequence.	R
WRSSR5,6	56	Prints a status report in project coordinator sequence.	R
WRSSR7,8	57	Prints a status report for each building.	R
WRSTFR	58	Transfers work requests from the active file (WRSDATA) to the inactive file (WRSHIST) which have been completed and paid or cancelled.	H
WRSTRK0	60	Prints the average processing time from date of request to date received.	R
WRSTRK1	61	Prints the average design processing time for all work requests.	R
WRSTRK2	62	Prints the average procurement processing time for change orders.	R

INDEX OF PROGRAMS

4. INSTALLING THE SYSTEM

1) No New Hardware Is Required

The work request system operates using the Q1's already in place throughout NASA. It uses floppy disks only.

If the number of work requests tracked exceeds about 1,200 per year, then the system may have to be shifted to the hard disk drive which the centers also already have. This would require programming but no new hardware.

2) The Milestones to Be Tracked Must Be Determined

New users must understand the routing of their work requests. They must then decide what milestones they wish to track. Use Figures 3, 4 and 5 as models, especially Figure 5, the list of data to be collected. The more the center's list resembles Figure 5 or a subset thereof, the easier will be the installation.

3) Some Programming Will Be Needed

The existing software will have to be modified as follows:

- The center's name will be substituted for Goddard's on all reports of interest to the center.
- The data entry and updating programs will be changed so that the screen shows only those data items that interest the center, using terminology familiar to the center.
- Various reports will be changed to reflect the milestones and terminology used at the center.

* * *

Attached are sample reports produced by the system plus an extract from the Operator's Manual.

ATTACHMENT A

SAMPLE REPORTS

AS OF 10/20/78

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
DELIVERY ORDER NUMBER CROSS REFERENCE LIST

PAGE 1
PROGRAM: MRSDCH2

DELIV ORD #	WORK REQ #	DELIV ORD #	WORK REQ #	DELIV ORD #	WORK REQ #	DELIV ORD #	WORK REQ #
0057	4459	2003	5629	2015	566001	2029	5735
0057	445001	2004	5610	2015	566002	2029	573501
0057	445002	2004	561001	2016	5603	2029	573502
0085	4687	2004	561002	2016	560301	2030	5736
0085	468701	2005	5651	2017	5622	2030	573601
0085	468702	2006	5641	2017	562201	2031	5722
0361	5175	2007	5664	2018	5607	2031	572201
0474	5589	2008	5611	2018	560701	2032	5733
0474	558001	2009	5625	2019	5599	2033	5732
0485	5598	2010	5647	2020	5586	2033	573201
0486	5591	2011	5609	2020	558601	2034	5721
0487	5597	2011	560901	2022	5704	2034	572101
0489	5594	2011	560902	2022	570401	2035	5694
0490	5605	2012	5103	2022	570402	2035	569401
0490	560501	2012	510301	2022	570402	2036	5283
0490	560502	2012	510302	2022	570403	2036	528301
0491	5576	2012	510303	2022	570404	2036	528302
0492	5604	2013	5018	2023	5688	2036	528303
0494	5575	2013	501801	2024	5554	2037	5601
0494	557501	2013	501802	2024	555401	2038	5614
2001	5663	2013	501803	2025	5600	2039	5608
2001	566301	2013	501804	2025	560001	2039	560301
2002	4963	2014	5680	2026	5710	2040	5623
2002	496301	2014	568001	2027	5584	2042	5618
2002	496302	2015	5660	2028	5734	2043	5595

DATE PRINTED: 10/20/78 WORK ... REST INFORMATION TRACKING SYSTEM PAGE NO 1

ACTIVE WORK REQUEST NUMBER DIRECTORY

3895
389501
4334
4402
440201
440202
4435
443501
4445
444501
444502
444503
444504
4450
445001
445002
4598
4629
462901
462902
4647
4674
467401
467402
467403
467404
467405
467406
467407
4687
468701
468702
4692
469201
4694
4713
4719
471901
4770
4771
4798
479801
4816
481601
481602
4900
490001
490002
4931
4943
494301

DATE PRINTED 09/17/79 — FACILITIES ENGINEERING DIVISION - WORK REQUEST SYSTEM — EDIT ANALYSIS REPORT — PROGRAM WRSEPRT

FIELD	DATA	ERROR FLAG
WORK REQUEST NUMBER:	6826	
DATE RECEIVED:	12/26/78	
ORIGINATOR CODE:	700	
ORIG. REQUEST NO:	NAV	
DATE OF REQUEST:	12/22/78	
DESCRIPTION:	PROVIDE EXIT	
BUILDING NUMBERS:	011	
ROOM NUMBERS:	P001	
PROJECT COORDINATOR:	ADL	
ESTIMATED DESIGN START:	02/20/79	
ESTIMATED DESIGN COMPLETION:	08/14/79	
DATE FROM ENGINEERING:	08/22/79	
ESTIMATED COST:	$123,847.06	****
ACTUAL DESIGN COMPLETION:	06/13/79	
DATE TO PAD:		
DATE FROM PAD:		
CONTRACTOR NAME:		
APPROPRIATION TITLE:	COF	
JOB ORDER NUMBER:	270-846-52-97-01	
FISCAL YEAR:	79	
P R AMOUNT:	$123,847.06	
PROCUREMENT CONTROL NO:	08.816	
PCN DATE:	08/22/79	
DATE TO ACCOUNTING:	08/23/79	
DATE FROM ACCOUNTING:	08/23/79	
DATE TO PROCUREMENT:	08/23/79	
DELIVERY ORDER NO:	3355	
DATE OF PO/DO:	08/31/79	
PURCHASE ORDER NUMBER:		
PO/DO AMOUNT:	$123,847.06	****
ACTUAL CONST START:		
DATE ACTUAL CONST COMPLETE:		
INVOICE AMOUNT:	$0.00	
PAID INVOICE AMOUNT:	$0.00	
COMMENTS:		
NUMBER OF AMENDMENTS:	00	
DATE RECORD CREATED:		
LAST F/K DATE:	09/11/79	
SAFETY		

NOTE: The system has an excellent error-checking facility. The "Edit Analysis Report" is run against the active jobs. Any jobs that have impossible or unreasonable data entries are printed like this one, one page per job.

Here, the **** indicate that two dollar entries each exceed $100,000. This may or may not be an error.

This error-checking program is in addition to error checking routines which are done at the time data is entered or updated.

AS OF 06/05/79 GODDARD SPACE FLIGHT CENTER PAGE 1
FACILITIES ENGINEERING DIVISION PROGRAM: MRSLR2
EVANS REPORT

BUILDING	ROOM NUMBERS ...1.... ...2....	ORG CODE	<---DESCRIPTION---->	DELIVERY ORDER NO	WORK REQ NO	DATE RECEIVED
09	020	271	CHECKED PLATE COVER		7107	05-10-7
001	005	271	PULL CABLES	5140	7006	05-29-79
001	006	603	HYDROMETER RECP	5154	7045	04-16-79
001	006	603	LEVEL RAISED FLOOR	2698	6709	10-26-78
001	006	603	PAINT DUCTS		7100	05-09-79
001	029	271	PROV DUPLEX RECEPTAC	2739	6762	12-04-78
001	154	225	REMOVE PARTITION	5056	6950	02-06-79
001	157	220	INSTL CABLES		7082	05-02-79
001	2FL VAR	211	ROOM MODS	5201	7087	05-03-79
001	BASMT	250	BLDG MODS		7030	05-02-79
001	C110	271	INSTALL COATRACKS	5117	6945	04-16-79
001	C110	271	REVERSE CABLE BOX	5064	6905	03-30-79
001	C110	290	INST DISHWASHER		6741	11-24-78
001	C110	290	REPL SINKS		6742	11-14-78
001	LOBBY	271	REMODEL LOBBY	5046	6796	11-16-78
001	MECH	271	CHANGE MOTOR	2748	6715	10-27-78
001	VAR	205	FAB SIGNS	2672	6581	11-29-77
001	VAR	205	PROV STAIR RAILING		6619	12-18-78
002	006	660	THERMAL INSULATION		6958	4-26-79
002	009	660	PAINT SUITE		7138	05-24-79
002	012 022	650	PROVIDE POWER	5160	6996	03-07-79
002	026	661	CHGE OUTLET	5151	6956	04-05-79
002	107 T	650	PT DRS & WALLS	5195	7010	04-20-79
002	111	650	INSTL ELEC OUTLET		7079	05-08-79

AS OF 10/20/78

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
FRANK GRADY REPORT - WORK REQUESTS IN DESIGN

WORK REQ #	DATE RECEIVED	ORG CODE	BLD	ROOM	<-- DESCRIPTION --->	<----------DESIGN/ENGINEERING----------> DATE REC'D	ENG COORD	EST DSGN START DT	EST DSGN COMPL DT	ALT DSGN COMPL DT	ESTIMATED COST	DATE TO ENG	<--------- COMMENTS --------->
6652	10-04-78	513	003	57F	INST AIR DEFLECTOR	10-05-78							
6653	10-04-78	512	007	108 158	INST HT: PULL CABLES	10-05-78							
6654	10-07-78	720	005	OUT	ELEC SERV	10-05-78							
6655	10-05-78	232	007	GAS B	PAINT CEILING	10-05-78							
6656	10-05-78	232	016	STOCK	INST EMERG LIGHTS	10-05-78							
6657	10-05-78	711	022	196 199C	ALTERATIONS TO RM	10-05-78							
6658	10-05-78	573	003	170	MT BLACKBD	10-05-78							
6659	10-05-78	512	014	19B 19C	PROV WIRE ENCLOS:MOD	10-05-78							
6660	10-05-78	250	003	AUD	REPL PROJ CORD	10-05-78							
6661	10-06-78	271	16W	S122E	PROV STEEL LADDER	10-06-78							
6662	10-06-78	513	023	E331	MT BLACKBD	10-10-78							
6663	10-10-78	842	014	H189	MODS TO ROOM	10-10-78							
6664	10-06-78	290	026	FOYER	GROUT GRANITE SLABS	10-10-78							
6665	10-10-78	945	022	ROOF	PROV WALKWAY	10-10-78							
6666	10-12-78	911	022	G 7	MODS TO ROOM	10-12-78							
6667	10-12-78	290	021	MENS	REPLACE TILE	10-12-78							
6668	10-12-78	532	023	C246	ELEC WORK	10-12-78							
6669	10-12-78	930	016	G 11	REHINGE DOOR	10-12-78							
6670	10-12-78	752	005	E 29	PROV COMP AIR LINE	10-12-78							
6633	09-26-78	510	003 014	00636	PROV CO SYST	09-26-78	ADL	10-06-78	10-[illegible]-78				
6635	09-26-78	410	006	VAR	INST SPEAK,HOLD ETC	09-26-78	ADL	10-10-78	10-[illegible]-78				

SUMMARY OF WORK REQUESTS IN DESIGN

10/20/76

	LENGTH OF TIME IN DESIGN						
	0-30	31-60	61-90	91-120	OVER 120	TOTAL	BEHIND SCHEDULE
UNASSIGNED	19	0	0	0	0	19	0
LATZKO	9	0	0	0	0	9	6
AWK	0	1	0	0	0	1	1
CLL	1	1	1	0	0	3	1
MILLER	8	0	0	0	0	8	8
WEAVER	2	9	0	2	5	18	5
STITZ	3	2	0	2	2	9	2
TOTAL	42	13	1	4	7	67	23

NUMBER OF PROJECTS BASED ON CURRENT PROJECTIONS
THAT WILL EXCEED 120 DAYS IN DESIGN 0

NUMBER OF PROJECTS THAT ESTIMATED DESIGN
COMPLETION DATES HAVE NOT BEEN ESTABLISHED 3

DATE PRINTED= 05/21/79 — NSPA REQUEST SYSTEM - FACILITIES ENGINEERING DIVISION — PAGE NO: 1
PR AS ISSUED BUT NOT RETURNED FROM PROCUREMENT CYCLE — PROGRAM: NPSR36

NA REQ NUMBER	PR NUMBER	PR DATE	<-- DESCRIPTION --->	ORIG CODE	BUILDING .1. .2.	ROOM ..1..	CONT. NAME	SAFETY CODE	<-- ACCOUNTING --> DATE TO	DATE RP	<- PROCUREMENT --> DATE TO	<--------- COMMENTS --------->
606201	070559800	02/21/79							02/27/79	02/27/79	02/27/79	FABRICATED OFF-SITE
609902	07074	05/06/79							05/19/79			
616603	070799600	04/02/79							04/03/79	04/03/79	04/03/79	
619002	075300001	05/14/79							05/16/79			
636901	070551100	04/10/79							04/12/79	04/12/79	04/12/79	
655303	07089	05/14/79							05/16/79			

DATE PRINTED = 09/11/79

WORK REQUEST SYSTEM - FACILITIES ENGINEERING DIVISION
WORK REQUESTS BACK FROM DESIGN BUT NO PR ISSUED YET

PROGRAM: WRSFOG4

WK REQ NUMBER	SAFETY	ORIG CODE	<-- DESCRIPTION -->	BUILDING #S ..1.. ..2..	<--- ROOM #S ---> ...1... ...2...	ESTIMATED COST	DATE FR ENGINEER	<--------- COMMENTS --------->
6979	S	743	MODIFY ROOM	005	W053A	20,000.00	08-08-79	HOLD FOR FUNDS 080979
7169		271	INSULATE DUCTWK	017	VAR	7,769.02	07-26-79	HOLD FOR FUNDS 072679
7190		271	REP COILS	017	ROOF	21,797.31	08-01-79	HOLD FOR FUNDS 080179
7191		271	REVISE AC SYSTEM	018	VAR	15,672.19	07-25-79	HOLD FOR FUNDS 072679

DATE PRINTED 05/21/79

WORK REQUEST SYSTEM - FACILITIES ENGINEERING DIVISION
DELIVERY ORDERS OR PURCHASE ORDERS ISSUED BUT JOB NOT COMPLETED

WR REQ NUMBER	ORIG CODE	<-- DESCRIPTION --->	BUILDING .1. .2.	< ROOM #S > ..1.. ..2..	CONTR. NAME	PO/PO AMOUNT	DELIVERY OR PURCH ORD #	DELIVERY OR PURCH ORD DT	ACTUAL CONST START DATE	<---------- COMMENTS ---------->
4402	950	INSTL POWER WATER PR	019	002		4,464.33	2596	09-26-78	10-23-78	69% COMPLETE 051679
440201						436.66	2596	09-26-78	- -	
440202						1,113.19	2596	10-02-78	- -	
440203						138.18	2596	01-18-79	- -	
4596	720	NAV	209	208	LANCON	1,650.00	526218	09-29-78	02-02	

DATE PRINTED 05/08/79

WORK REQUEST SYSTEM - FACILITIES ENGINEERING DIVISION
LOAD SHEET #3

WORK REQUEST NUMBER	PROCUREMENT NUMBER	DATE TO ACCOUNTING	DATE FROM ACCOUNTING	DATE TO PROCUREMENT	CONTRACTOR NAME	DELIVERY ORDER NUMBER	DATE OF DO OR PO	PURCHASE ORDER # (CONTRACT #)	DELIVERY OR PURCHASE ORDER AMOUNT	COMMENTS
4402	07583	05/15/77	05/20/77	09/25/78		2596	09/28/78		4,984.33	60% COMPLETE 051679
440201	07584	05/15/77	05/20/77	09/25/78		2596	09/28/78		438.86	
440202	07583	09/28/78	09/28/78	09/28/78		2596	10/02/78		1,113.10	
440203	070380300	01/05/79	01/05/79	01/05/79		2596	01/18/79		138.18	
440204	071060300									
4450	57525	09/30/76	09/30/76	09/30/76		0057	09/30/76		20,000.00	RALPH PROCES INV 12/29
445001	57525001	09/30/76	09/30/76	09/30/76		0057	09/30/76		680.00	
445002	07367	03/11/77	03/14/77	03/14/77		0057	03/21/77		132.70	
4598	57723	07/06/78	07/11/78	07/11/78	LANCON		09/29/78	525214	1,650.00	10% COMPLETE
459801	07057	02/15/79	02/15/79	02/15/79			04/12/79	525214	330.00	
4687	57526	09/29/76	10/14/76	10/14/76		0085	11/17/76		6,555.86	RALPH PROCES INV 12/29
468701	07193	02/01/77	02/10/77	02/10/77		0085	02/10/77		19,581.48	
468702	07193001	04/06/77	04/13/77	04/13/77		0085	04/13/77		218.43	
4719	07668	07/06/77	09/13/78	09/14/78	JHL		09/26/78	S60432	2,074.00	
471901	57218	11/28/77	09/13/78	09/14/78			09/26/78	S60432	3,520.00	MAT 051579
4816	57560	04/13/78	05/05/78	05/05/78		2372	05/12/78		13,579.04	
481601	575600001	06/20/78	06/23/78	06/23/78		2372	07/08/78		90.00	CO# 4
481602	575600002	07/31/78	08/03/78	08/03/78		2372	08/21/78		1,433.00	
481603	07564	12/28/78	01/09/79	01/09/79		2372	01/09/79		269.99	
481604	075640001	03/20/79	03/26/79	03/26/79		2372	03/28/79		478.33	
4943	07428	03/28/77	04/04/77	09/14/77		2328	04/19/78		11,275.56	98% COMPLETE 050279
494301	57514	02/24/78	03/16/78	03/21/78		2328	04/24/78		6,071.56	98% COMPLETE 0040479
494302	576440001	06/06/78	06/12/78	06/12/78		2328	06/19/78		5,567.50	
494303	070300400	11/22/78	11/22/78	11/22/78		2328	01/24/79		340.82	
494304	070300701	01/16/79	01/16/79	01/16/79		2328	01/24/79		138.50	

PURCHASE ORDER #	WORK REQUEST #	PURCHASE ORDER DATE	PURCHASE ORDER AMOUNT	CONTRACTORS NAME
522780	6500	01-24-79	5,000.00	COSP
522780	6704	01-23-79	750.00	CNTL SP
525207	6686	03-16-79	8,647.00	QUAL RO
525207	668601	03-16-79	609.00	
525207	668602	03-16-79	1,342.00	
525207	668603	03-16-79	2,500.00	
525210	6178	09-08-78	14,800.00	G AND M
525210	6700	01-19-79	3,118.00	G&M
525213	5652	08-08-78	16,500.00	CST COM
525213	565201	08-08-78	2,700.00	
525214	4598	09-29-78	1,650.00	LANCON
525214	459801	04-12-79	330.00	
525214	5798	04-12-79	10,734.00	LANCON
525214	6074	09-26-78	20,000.00	LANCON
525214	6699	02-16-79	2,695.00	LANCON
525214	669901	04-12-79	288.00	
525215	6070	09-26-78	1,933.66	COUNTY
525215	607001	02-06-79	4,959.01	
525215	607002	02-06-79	798.75	
525215	607003	02-06-79	85.24	
525215	6389	05-02-79	11,001.00	COUNTY
525215	638901	- -	00	
525215	6604	02-05-79	999.00	COUNTY
525215	6724	03-12-79	3,150.00	COUNTY
525215	6733	02-06-79	1,648.00	COUNTY
525215	6819	04-26-79	447.00	COUNTY
525215	681901	04-26-79	272.00	COUNTY
525215	6868	04-26-79	255.00	COUNTY
525215	686801	04-26-79	55.00	COUNTY
525218	6082	09-08-78	35,620.00	WILL
525218	608201	- -	00	
525220	6073	09-14-78	49,500.00	WARD EL
525220	6656	02-05-79	1,156.00	WARD
525220	6833	02-08-79	17,412.00	WARD EL
525220	6874	03-05-79	16,229.50	WARD
525220	6875	05-02-79	24,140.00	WARD
525220	687501	- -	00	
525220	6928	04-24-79	388.00	WARD
S30340	5730	09-28-77	1,490.00	JHL
S41906	5670	06-13-78	3,450.00	BEV
S41932	5013	07-26-78	8,800.00	GTY RF
S41932	501301	07-27-78	3,200.00	QTY RF
S53731	5634	05-25-78	1,193.00	JHL
S53731	563401	02-01-79	862.00	
S54711	6329	07-10-78	945.00	JHL
S56229	5072	08-23-78	450.00	JHL
S56229	507201	08-23-78	447.00	JHL
S56229	507202	01-03-79	1,021.37	
S56924	6569	10-02-78	1,020.00	JHL
S56924	656901	03-07-79	1,109.56	
S59567	6674	01-03-79	79.02	JHL

AS OF 06/11/79

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
PROCUREMENT REQUEST CONTROL LOG

WORK REQ NUMBER	<-- DESCRIPTION -->	PROCUREMENT CONTROL #	PCN DATE	CONTRACTOR NAME	FY	APPROP TITLE	JOB ORDER NUMBER	PR AMOUNT	FMD AVAILABLE BALANCE
4687	OFFICE MODIFICATIONS	57526	09-29-76		77	IMS	680-992-54-25-01	6,555.86	
4450	OFF SPACE RENOVATION	57525	09-30-76		77	RPM	270-020-05-01-27	20,000.00	
4450-01		57525001	09-30-76		77	RPM	270-020-05-01-27	680.80	
4687-01		07193	02-01-77		77	IMS	680-992-54-25-01	19,581.48	
5072	INST CABLE TRAYS	07336	03-04-77	JHL	77	IMS	860-992-54-01-01	450.00	
4450-02		07367	03-11-77		77	RPM	273-020-04-01-01	132.70	
4943	EXTEND EXIST. WALLS	07428	03-28-77		77	IMS	740-992-54-25-01	11,275.56	
5013	INTEGR BALLOON PYLDS	07446	04-04-77	QTY RF	77	IMS	740-992-54-01-00	5,600.00	
4687-02		07193001	04-06-77		77	IMS	680-992-54-25-01	218.43	
4402	INSTL POWER WATER DR	07583	05-13-77		77	IMS	950-992-54-01-01	8,334.27	
4402-01		07584	05-13-77		77	IMS	900-992-54-01-01	438.86	
4719	SOUNDPROOF BOOTH	07668	07-06-77	JHL	76	R&D	850-312-20-10-12	1,900.00	
5218	A/C MODIFICATIONS	07699	07-20-77		77	COF	270-829-12-77-01	4,800.00	
5680	TRAILER SIGNS	07794	08-26-77		77	IMS	600-992-54-01-01	1,000.00	
5584	CONCRETE CURB	07807	09-19-77		77	RPM	273-020-04-01-36	4,120.00	
5730	GAUGES, METERS, ETC	07810	09-23-77	JHL	77	RPM	273-020-04-01-01	1,490.00	
5218-01		57064	10-07-77		77	COF	270-829-12-77-01	1,605.52	
5762	MODS	57078	10-13-77		77	COF	270-830-62-77-01	4,670.00	
5679	REMOVE PLR'NG & PT	57129	10-25-77	BEV	78	IMS	750-992-54-01-00	5,000.00	
5762-01		570780001	11-18-77		77	COF	270-830-62-77-01	5,067.01	
4719-01		57218	11-28-77		77	R&D	850-312-20-10-54	3,200.00	
5766	OUTLETS	57225	11-29-77		78	IMS	680-992-54-01-01	2,881.19	
5762-02		570780002	01-10-78		77	COF	270-830-62-77-01	693.78	
6858-01		070800601	01-17-78		79	IMS	273-020-05-01-00	955.97	

WORK REQUEST STATUS

WORK REQ NO.	ORG COD	DATE RECEIVED	DESCRIPTION/ ORIGINATOR REQ #	BLD	EST'D ACTUAL* DESIGN COMP'L DATE	EST'D OBLIGATED* ACTUAL** COST	PROCMT REQUEST NO.	DATE OF PROCMT REQUEST	CONTR NO.	DATE OF CONTR.	DATE CONSTR START COMP'L*	COMMENTS
6789	270	12/06/78	REPL BOX FOR CABLES NAV	024	12/07/78*	2584.00*	07549	12/08/78	62008	02/06/79		AREA NA
6789	270					400.00*	075490001	04/12/79	62008	07/02/79		
6789	270					924.00*	075490002	05/21/79	62008	07/02/79		
6877	270	01/19/79	SAFETY ITEMS NAV	017	03/21/79*	4511.92*	070780200	06/18/79	3266	06/28/79	07/02/79	95% COMPLETE 091079
6878	270	01/19/79	SAFETY ITEMS NAV	017	02/06/79*	611.51*	070560900	04/16/79	3229	05/30/79		
6909	270	01/30/79	PARTITION ROOMS NAV	022	06/28/79*	10836.13*	071180100	08/09/79	3336	08/17/79	08/27/79	20% COMPLETE 091079
6909	270					678.32	071180201	09/12/79				
7101	270	05/10/79	SDWALK/WATPRF WALLS NAV	400	05/10/79*	1674.36*	07684	05/16/79	3242	06/08/79	07/16/79	80% COMPLETE 091079
7101	270					390.91	07773	07/27/79	3242			
7136	270	05/22/79	PROV CABLE TRAY NAV	014	05/22/79*	14972.84*	562870001	05/25/79	3226	05/29/79	06/26/79	70% COMPLE GOVT MAT 091079
7312	270	08/20/79	REPLACE LOCK NAV	017	08/20/79*	160.48	070901300	08/29/79				
7324	270	08/22/79	FIRE ALARM EQUIP NAV	FSB	09/12/79							
7360	270	09/11/79	HANDICAP MODS	008	09/30/79	7202.00	071310100	09/12/79				
5218	271	02/11/77	A/C MODIFICATIONS NAV	021	04/28/77*	4800.00*	07699	07/20/77	2122	12/08/77	01/04/78	MAT 041979
5218	271					3188.52*	57064	10/07/77	2122	12/08/77		98% COMPLETE 032279
5218	271					616.65*	570640002	03/01/78	2122	03/16/78		
5218	271					325.25*	07577	01/08/79	2122	02/06/79		

DATE: 06/06/79 GODDARD SPACE FLIGHT CENTER PAGE: 1

PROJECT CO-ORDINATOR FACILITIES ENGINEERING DIVISION PROGRAM: WBSSR5,6

WORK REQUEST STATUS

WORK REQ NO.	ORG COD	DATE RECEIVED	DESCRIPTION	BLD	EST'D ACTUAL* DESIGN COMP'L DATE	EST'D OBLIGATED* ACTUAL** COST	PROCMT REQUEST NO.	DATE OF PROCMT REQUEST	CONTR NO.	DATE OF CONTR.	DATE CONSTR START COMP'L*	COMMENTS
7114	730	05/16/79	CUT HOLE IN DOOR	011								
7115	511	05/16/79	INST RECEPTACLES	014								
7126	752	05/22/79	FL & TANK SUPPORTS	005								
7127	450	05/22/79	INST SCREEN,ETC	006								
7129	680	05/22/79	ELEV AIRHAND UNIT	200								
7130	680	05/22/79	PAINT BUILDING	200								
7140	531	05/25/79	ASSEMBLE SHELVES	003								
7142	755	05/25/79	REPLACE DOOR	007								
7144	755	05/25/79	RELOCATE SIGNS	010								
7145	570	05/29/79	CHGE DOOR NUMBERS	003								
7146	600	05/29/79	ELECTRICAL OUTLETS	097								

BUILDING NUMBER 303 FACILITIES ENGINEERING DIVISION BRSSRR

WORK REQUEST STATUS

WORK REQ NO.	ORG COD	DATE RECEIVED	DESCRIPTION	BLD	EST'D ACTUAL* DESIGN COMP'L DATE	EST'D OBLIGATED* ACTUAL** COST	PROCMT REQUEST NO.	DATE OF PROCMT REQUEST	CONTR NO.	DATE OF CONTR.	DATE CONSTR START COMP'L*	COMMENTS
6167	532	03/09/78	REDUNDANT POWER	003	10/04/78*	13000.00*	07527	11/20/78	2721	12/07/78	01/23/79	20% COMPLETE 030679
6167	532					8819.63*	075270001	11/20/78	2721	12/07/78		GOVT MAT 122778
6167	532					657.83*	070190800	01/10/79	2721	01/22/79		
6480	292	06/27/78	MODF LOW AMB SYST	003	08/10/78*	2166.28*	57854	09/18/78	2594	09/26/78	11/09/78	90% COMPLETE
6480	292					1293.23*	070550400	11/13/78	2594	11/20/78		MAT 050279
6540	532	07/31/78	INSTL POWER PANEL	003	10/10/78*	535.89*	070190300	10/30/78	2654	11/07/78	11/07/78	USER HOLD 022379
6660	250	10/05/78	REPL PROJ CORD	003	10/19/78*	123.25**	070570400	10/27/78	2646	11/07/78	04/26/79*	
6682	512	10/18/78	PULL CABLES	003	05/14/79*	29721.58	07097	05/17/79			05/21/79	
6682	512					6564.50	07686	05/17/79				
6682	512					1378.00	85094028	05/17/79				
6682	512					1779.08	07687	05/17/79				
6719	532	10/31/78	RELOC REGULATOR, ETC	003	12/18/78*	3274.34**	070190500	12/19/78	2756	12/21/78	04/27/79*	
6719	532						070191000	01/26/79	2756	01/26/79		CO 032279
6719	532						070191202	02/13/79	2756	03/08/79		
6719	532						070191503	03/21/79	2756	03/28/79		
6734	853	11/03/78	ROOM MODS	003	02/15/79*	5391.01**	070790200	02/21/79	3079	03/09/79	03/21/79	90% COMPLETE 051579
6734	853						070791201	04/27/79	3079	05/10/79		
6738	840	11/08/78	ROOM MODS	003	12/22/78*	2661.24**	07562	12/22/78	3008	01/22/79	05/02/79*	
6738	840						070351100	02/13/79	3008	03/15/79		
6738	840						070351201	04/12/79	3008	04/30/79		
6801	842	12/11/78	REM PNEUMATIC TUBE	003	02/28/79*	1026.51*	07515	03/01/79	3089	03/16/79	03/28/79	50% COMPLETE 050479
6834	271	12/28/78	UPGRADE ROOMS	003	01/08/79*	2722.69**	070581200	01/11/79	3000	01/12/79	05/04/79*	
6834	271						070801601	02/02/79	3000	03/13/79		
6834	271						070801502	02/16/79	3000	02/27/79		
6863	530	01/10/79	RELEVEL FLOOR	003	03/20/79*	69.22**	070191403	03/22/79	3130	03/28/79	04/12/79*	
6927	851	02/02/79	MODIFY AIR DUCT	003	02/28/79*	43.37*	07051	03/01/79	3108	03/19/79		REDESIGN
6927	851					194.66	070791503	05/21/79				
6937	100	02/13/79	CONSTRUCT CABINETS	003	02/15/79*	1188.00**	07607	02/15/79	53079	03/02/79	03/29/79*	
6971	100	03/08/79	PT WALL: RELOC HDS	003	03/12/79*	1027.42**	07624	03/12/79	3021	03/14/79	03/19/79*	

10/11/78

F.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- DATE OF REQUEST TO DATE RECEIVED BY F.E.D.
SEPTEMBER

PROGRAM: WRSTNKO

AVG. # OF DAYS 8.875
NUMBER COMPLETED 8

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ COR	DATE FROM ENGR.	COST	P.R. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
5704	09/01/77	09/06/77	WAB	09/06/77	$300.00	07798	09/06/77	09/21/77	2022	09/21/77	09/21/77		$0.00	
5709	08/23/77	09/06/77	ADL	03/10/78	$2,740.10	57659	06/01/78	07/03/78	2449	07/03/78	08/31/78		$0.00	
5710	08/29/77	09/08/77	WBS	09/14/77	$46,558.69	07806	09/19/77	09/28/77	2026	09/28/77	08/21/78		$0.00	
5728	09/12/77	09/19/77	CLM	11/16/77	$3,864.00	57539	04/17/78	06/19/78	S81907	06/19/78	08/03/78	09/01/78	$0.00	JHL
5730	09/16/77	09/21/77	WAB	09/22/77	$1,490.00	07810	09/23/77	09/28/77	S30340	09/28/77	10/03/77		$0.00	JHL
5731	09/19/77	09/21/77	WAB	03/24/78	$11,048.58	57471	03/24/78	04/14/78	2305	04/13/78	04/20/78	09/01/78	$0.00	
5756	09/13/77	09/30/77	WAB	02/13/78	$3,810.70	07548	03/29/78	04/24/78	2312	04/24/78	06/07/78		$0.00	
5758	09/19/77	09/30/77	WAB	03/07/78	$3,870.00	57301	04/10/78	05/11/78	S81585	05/10/78	05/19/78	06/23/78	$0.00	JHL

10/11/78

F.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- DESIGN -- ALL PROJECTS
OCTOBER

PROGRAM: WRSTAK1

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS		24	125.33	280	117.33
NUMBER COMPLETED	0	2	3	1	6

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ CDR	DATE FROM ENGR.	COST	P.N. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
5083	12/17/76	01/04/77	JLW	10/11/77	$23,585.22	57395	01/26/78	03/03/78	2237	03/03/78	03/17/78		$0.00	
5514	05/13/77	05/23/77	ADL	10/27/77	$4,200.00	57378	02/22/78	06/13/78	S41905	06/13/78	07/19/78	09/28/78	$0.00	QUAL MF
5514	05/13/77	05/23/77	ADL	10/27/77	$4,200.00	57378	02/22/78	06/13/78	S41905	06/13/78	07/19/78	09/28/78	$0.00	QUAL MF
5670	07/19/77	08/19/77	CLM	10/20/77	$3,450.00	57129	10/25/77	06/13/78	S41906	06/13/78	06/27/78		$0.00	REV
5703	08/26/77	08/31/77	JLW	10/06/77	$978.11	57119	10/20/77	12/13/77	2135	12/13/77	12/19/77	08/11/78	$0.00	
5795	09/23/77	10/13/77	CLM	10/25/77	$1,897.00	57151	11/02/77	02/17/78	S50971	02/17/78	07/15/78	08/03/78	$0.00	JHL

10/11/78

F.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- PROCUREMENT PROCESS--DELIVERY ORDERS
JANUARY

PROGNAM: WRSTAT3

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS				9	9
NUMBER COMPLETED	0	0	0	1	1

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ CDR	DATE FROM ENGR.	COST	P.R. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
4674	07/15/76	08/06/76	WAB	01/09/78	$16,011.51	57285	01/10/78	01/19/78	2169	01/19/78	01/19/78		$0.00	

10/11/78

P.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- CONSTRUCTION START--DELIVERY ORDERS
MARCH

PROGNAM: WRSTAK5

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS		12	16	14	14
NUMBER COMPLETED	0	2	2	1	5

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ COR	DATE FROM ENGR.	COST	P.N. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
5075	08/13/76	08/13/76	WAB	07/18/77	$4,149.19	57293	01/10/78	03/03/78	2204	03/03/78	03/30/78	06/15/78	$0.00	
507501					$101.74	572930001	04/14/78	04/25/78	2204	04/25/78			$0.00	
5983	12/17/76	01/04/77	JLW	10/11/77	$23,585.22	57395	01/26/78	03/03/78	2237	03/03/78	03/17/78		$0.00	
598301					$2,598.39	573050001	06/15/78	06/22/78	2237	06/21/78			$0.00	
598302					$74.84	573050002	07/11/78	09/01/78	2237	09/01/78			$0.00	
598303					$673.18	573050003	08/17/78	09/01/78	2237	09/01/78			$0.00	
598304					$314.80	07501	10/04/78		2237				$0.00	
5980	11/23/77	12/22/77	ADL	02/06/78	$1,831.41	57329	02/06/78	02/17/78	2203	02/17/78	03/06/78	09/07/78	$0.00	
598001					$339.00	573290001	09/25/78		2203				$0.00	
6133	02/15/78	02/22/78	CLM	03/06/78	$408.69	57413	03/08/78	03/16/78	2248	03/16/78	03/23/78	07/28/78	$0.00	
613301					$124.64	574130001	04/05/78	05/05/78	2248	04/20/78			$0.00	
613302					$97.00	574130002	04/12/78	05/05/78	2248	05/05/78			$0.00	
6138	02/23/78	02/23/78	CLM	02/23/78	$1,285.00	57382	02/23/78	02/24/78	2194	02/24/78	03/01/78	07/20/78	$0.00	
613801					$1,325.64	573820001	03/13/78	04/03/78	2194	04/03/78			$0.00	
613802					$263.75	573820002	03/23/78	06/27/78	2194	06/27/78			$0.00	
613803					$468.75	573820003	06/19/78	06/27/78	2194	06/27/78			$0.00	

10/11/78 AVERAGE PROCESSING TIME -- TOTAL TIME FOR CONSTRUCTION-DELIVERY ORDERS PROGRAM: WRSTRK6

MAY

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS	27				27
NUMBER COMPLETED	1	0	0	0	1

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ COR	DATE FROM ENGR.	COST	P.R. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
6177	03/02/78	03/10/78	WBS	04/12/78	$118.82	57525	04/12/78	04/24/78	2314	04/19/78	05/04/78	05/16/78	$0.00	
617701					$198.43	575250001	06/19/78	06/27/78	2314	06/27/78			$0.00	

10/11/78

F.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- ACTUAL TIME UNDER CONSTRUCTION--DELIVERY ORDERS
JULY

PROGRAM: WRSTRK7

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS	1	42	80		46.375
NUMBER COMPLETED	1	5	2	0	8

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ COR	DATE FROM ENGR.	COST	P.R. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
5891	10/21/77	11/09/77	WAB	05/11/78	$394.33	57610	05/12/78	06/02/78	2397	06/01/78	06/28/78	07/28/78	$0.00	
589101					$157.36	576100001	07/19/78	08/03/78	2397	08/03/78			$0.00	
5996	12/09/77	12/14/77	JLW	04/25/78	$1,109.12	57577	05/01/78	06/13/78	2412	06/13/78	06/27/78	07/19/78	$0.00	
6133	02/15/78	02/22/78	CLM	03/06/78	$408.69	57413	03/08/78	03/16/78	2248	03/16/78	03/23/78	07/28/78	$0.00	
613301					$124.64	574130001	04/05/78	05/05/78	2248	04/20/78			$0.00	
613302					$97.00	574130002	04/12/78	05/05/78	2248	05/05/78			$0.00	
6138	02/23/78	02/23/78	CLM	02/23/78	$1,285.09	57382	02/23/78	02/24/78	2194	02/24/78	03/01/78	07/20/78	$0.00	
613801					$1,325.64	573820001	03/13/78	04/03/78	2194	04/03/78			$0.00	
613802					$263.75	573820002	03/23/78	06/27/78	2194	06/27/78			$0.00	
613803					$468.75	573820003	06/19/78	06/27/78	2194	06/27/78			$0.00	
6262	04/03/78	04/20/78	ADL	05/11/78	$82.55	57612	05/12/78	06/07/78	2404	06/05/78	07/19/78	07/20/78	$0.00	
626201					$165.72	576120001	08/30/78	09/21/78	2404	09/21/78			$0.00	
6393	05/17/78	05/25/78	CLM	05/31/78	$1,154.21	57654	05/31/78	06/19/78	2428	06/19/78	07/14/78	07/31/78	$0.00	
639301					$639.23	576540001	08/03/78		2428				$0.00	
6413	05/01/78	06/02/78	CLM	06/08/78	$3,754.53	57676	06/12/78	06/13/78	2414	06/13/78	06/21/78	07/10/78	$0.00	
641301					$580.41	576760001	07/26/78	09/26/78	2414	09/26/78			$0.00	
6414	05/30/78	06/05/78	CLM	06/16/78	$368.82	57687	06/16/78	07/03/78	2457	07/03/78	07/12/78	07/26/78	$0.00	
641401					$211.48	576870001	09/01/78	09/21/78	2457	09/21/78			$0.00	

10/11/78

F.E.D. WORK REQUEST SYSTEM
AVERAGE PROCESSING TIME -- ACTUAL TIME UNDER CONSTRUCTION--S-CONTRACTS
AUGUST

PROGNAM: WRSTRK7A

	$0-499.99	$500-2499.99	$2500-9999.99	$10000 & OVER	ALL WORK REQUESTS
AVG. # OF DAYS	10.6363	30			15.8
NUMBER COMPLETED	11	4	0	0	15

WORK REQ NO.	REQUEST DATE	DATE RECD	PRJ COR	DATE FROM ENGR.	COST	P.R. NO.	DATE OF PR	DATE FROM PROC	PO/DO NO.	DATE OF PO/DO	ACTUAL CONST START	ACTUAL CONST COMPL	PAID INVOICE AMT	CONTR NAME
5795	09/23/77	10/13/77	CLM	10/25/77	$1,897.00	57151	11/02/77	02/17/78	S50971	02/17/78	07/15/78	08/03/78	$0.00	JHL
5815	10/19/77	10/20/77	JLW	03/14/78	$120.00	57440	03/15/78	05/09/78	S52833	05/05/78	08/04/78	08/04/78	$0.00	JHL
5817	10/19/77	10/20/77	JLW	03/14/78	$498.00	57438	03/15/78	05/10/78	S52639	04/25/78	08/04/78	08/24/78	$0.00	JHL
5818	10/19/77	10/20/77	JLW	03/14/78	$235.00	57445	03/15/78	04/25/78	S52638	04/25/78	08/08/78	08/08/78	$0.00	JHL
5819	10/19/77	10/20/77	JLW	03/14/78	$73.00	57439	03/15/78	06/23/78	S54306	06/22/78	07/20/78	08/11/78	$0.00	JHL
581901					$673.00	574390001	05/12/78	06/23/78	S54306	06/23/78			$0.00	
5820	10/19/77	10/20/77	JLW	03/14/78	$372.00	57444	03/15/78	04/25/78	S52637	04/25/78	07/28/78	08/08/78	$0.00	JHL
5821	10/19/77	10/20/77	JLW	03/14/78	$420.00	57447	03/15/78	05/09/78	S52873	05/05/78	08/08/78	08/08/78	$0.00	JHL
5822	10/19/77	10/20/77	JLW	03/14/78	$240.00	57440	03/15/78	05/09/78	S52833	05/05/78	07/28/78	08/04/78	$0.00	JHL
5824	10/19/77	10/20/77	JLW	03/14/78	$311.88	57448	03/15/78	05/15/78	S53156	05/08/78	07/18/78	08/04/78	$0.00	JHL
5827	10/19/77	10/20/77	JLW	03/14/78	$400.00	57441	03/15/78	05/09/78	S52860	05/05/78	07/17/78	08/08/78	$0.00	JHL
5831	10/19/77	10/20/77	JLW	03/14/78	$375.00	57442	03/15/78	05/09/78	S52874	05/05/78	07/17/78	08/11/78	$0.00	JHL
6080	01/12/78	01/25/78	WBS	05/03/78	$681.00	06580	05/03/78	06/07/78	S53746	06/06/78	06/16/78	08/15/78	$0.00	JHL
6323	05/03/78	05/03/78	CLM	05/10/78	$500.00	57602	05/12/78	06/28/78	S54309	06/28/78	07/15/78	08/03/78	$0.00	JHL
6351	04/21/78	05/09/78	CLM	05/18/78	$494.00	57621	05/19/78	07/10/78	S54710	07/10/78	08/10/78	08/17/78	$0.00	JHL
6556	08/09/78	08/09/78	CLM	08/10/78	$84.52	57799	08/10/78	08/21/78	S60402	08/21/78	08/21/78	08/29/78	$0.00	JHL

DATE: 09/14/79

GODDARD SPACE FLIGHT CENTER

PAGE: 1

BUILDING NUMBER 002

FOM'S SAFETY WORK REQUESTS REPORT

PROGRAM: WRSFSR2

BY BUILDING

WORK REQ NO.	ORG COD	DATE RECEIVED	DESCRIPTION	BLD	EST'D ACTUAL* DESIGN COMP'L DATE	EST'D OBLIGATED* ACTUAL** COST	PROCMT REQUEST NO.	DATE OF PROCMT REQUEST	CONTR NO.	DATE OF CONTR.	DATE CONSTR START COMP'L*	COMMENTS
7155	691	06/04/79	REPLACE SINK	002	06/18/79*	260.01*	07758	07/19/79	3334	08/16/79	09/04/79*	
7307	660	08/15/79	INSTALL STAIRCASE	002	09/14/79							
7353	660	09/07/79	CANNECT VENT DAMPER	002	09/28/79							

AS OF 06/05/79

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
SAFETY ITEMS BY BUILDING

WORK REQ #	DATE RECEIVED	ORG CODE	BLD	ROOM	<-- DESCRIPTION --->	<-- ENGINEERING --> ENG COORD	DATE FR ENG	<---------- ACCOUNTING/BUDGET PROC. CNTL #	PROCURE DATE	DO # PO #	DO OR PO DATE	<--CONSTRUCTION--> ACTUAL ST DATE	COMPLETE DATE	PR AMOUNT (COMMENTS)
5931	11-28-77	205	001	VAR	FAB SIGNS	CLL	09-22-78	070560500	10-26-78	2672	11-13-78	01-15-79	04-12-79	1,295.60
6819	12-16-78	205	001	VAR	PROV STAIR RAILING	JLW	01-22-79	070561600	01-25-79	525215	04-26-79			175.00

90% COMPLETE 051579

AS OF 06/04/79

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
CODE 500/800 WORK REQUESTS IN BUILDINGS 3 AND 14

WORK REQ #	DATE RECEIVED	ORG CODE	BLD	ROOM	<-- DESCRIPTION --->	<-- ENGINEERING --> LNG COORD	DATE FR ENG	<---------- ACCOUNTING/BUDGET ---------> PROCURLMENT CONTROL NO	PROCURE DATE	DEL ORD	DEL ORD DATE	<--CONSTRUCTION--> ACTUAL ST DATE	COMPLETE DATE	PR AMOUNT (COMMENTS)
6203	03-22-78	510	014	C030 C028	POWER & A/C	ADL	06-21-78	57741	07-14-78	2495	07-19-78	08-01-78	03-27-79	13,199.52
6274	04-20-78	510	014	VAR	ELEC SERV	ADL	08-29-78	07539	11-28-78	2725	12-13-78	01-24-79	MAT 122778	36,605.78
6637	09-27-78	510	014	E212	POCC MODS	ADL	01-17-79	07593	01-19-79	3068	03-02-79	03-12-79	95% COMPLETE 041979	14,851.94
6921	02-01-79	510	014	E212	PROVIDE POWER	ADL	04-03-79	07649	04-10-79	3152	04-12-79	04-19-79	90% COMPLETE 051579	14,298.65
6856	01-09-79	511	014	E242 E242A	MODIFY ROOMS	ADL	03-23-79	070184300	03-28-79	3145	04-12-79	04-18-79	05-15-79	854.37
6908	01-29-79	511	014	C030	MODIFY ROOM	ADL	03-21-79	070184200	03-22-79	3126	03-26-79	04-02-79	04-27-79	2,074.18
6969	03-07-79	511	014	N087	COVER CABLES	ADL								
6970	03-07-79	511	014	N291 N230	ELECTRICAL WORK	ADL	05-10-79	071000200	05-16-79					701.30
7011	03-27-79	511	014	N087	SOUNDPROOF WALLS	CLM	04-04-79	070184800	04-16-79	3167	04-24-79	04-25-79		1,617.00
7026	04-05-79	511	014	N292	SOUNDPROOF WALL	CLM	04-13-79	070185100	04-16-79	3168	04-24-79	04-25-79	04-27-79	222.98
7063	04-20-79	511	014	GFE	INST VARISTORS	ADL								
7097	05-09-79	511	014	N291	PAINT ROOM	CLM	05-10-79	071000700	05-25-79					206.46
7096	05-08-79	511	014	S208	RUN CABLES	ADL								
7115	05-16-79	511	014	W021 C019	INST RECEPTACLE	ADL								
7115	05-16-79	511	014	W021 C019	INST RECEPTACLES									
7116	05-16-79	511	014	VAR	INST KEY LOCKS	CLM								
7012	03-27-79	512	003	028	INST SMOKE DETECTOR	JLW	04-25-79	070185300	04-27-79	3192	05-10-79	05-14-79	05-15-79	308.34
6682	10-18-78	512	003 014	VAR	PULL CABLES	ADL	05-14-79	07097	05-17-79			05-21-79		20,000.00
6129	02-10-78	512	014	S010	PULL COAX CABLE	HBS	03-07-78	57417	03-08-78	2250	03-16-78	07-19-78	04-25-79	1,837.36
6730	11-02-78	512	014	S010	MODS TO AC SYST	ADL	12-28-78	070182000	12-29-78	2772	12-29-78	01-15-79	03-14-79	1,183.00

DATE PRINTED 10/20/79

WORK REQUEST SYSTEM - FACILITIES ENGINEERING DIVISION
DELIVERY ORDERS AND PURCHASE ORDERS BUT NO FINAL PAYMENT HAS BEEN MADE

WK REQ NUMBER	ORIG CODE	<-- DESCRIPTION -->	BUILDING #S .1. .2. .3.	<-- ROOM #S --> ..1.. ..2.. ..3..	DELIVERY OR PURCH ORD #	DELIVERY OR PURCH ORD DT	ACT CONST COMPL DATE	INVOICE AMOUNT	<---------- COMMENTS ---------->
4334	510	PULL CABLES	VAR	VAR	S41916	07-07-78	09-20-78		
4435	500	INST PROJ SCREEN	023	S325	S34348	11-10-76	09-06-77	1,066.82	
4450	230	OFF SPACE RENOVATION	016	300	0057	09-30-76	09-08-77	25,525.40	
4629	740	AIR BEARING MOUNTING	005	W065	W076A, W072	2470	07-11-78	09-07-78	5,367.43
4647	683	MOUNT ANTENNA	021	108	S53736	06-06-78	09-07-78	1,155.00	
4687	680	OFFICE MODIFICATIONS	021	117	0085	11-17-76	09-16-77	31,147.53	
4692	750	INST EXHAUST HOOD	005	025A	2378	05-11-78	08-16-78		
4694	942	REMOVE ANTENNA	022	ROOF	S52071	05-05-78	05-31-78	1,084.09	
4900	750	BUILDING ENCLOSURE	007	MAIN LOBBY	S41554	04-14-78	07-18-78		INSUF FUNDS 083078
4931	850	ADD A/C & POWER	014	C003	2493	07-19-78	10-12-78	1,341.72	CO 081878
4953	290	CHANGE LIGHT	VAR	PENT	2002	09-02-77	08-21-78	1,478.77	
5075	850	MISC WORK	025	VAR	2204	03-03-78	06-15-78		
5175	271	INSTALL DUCTWORK A/C	023	4FL	0351	08-31-77	02-16-78	215,665.93	SEE 4894
5200	271	TRAFFIC CONTROL	OUT	OUT	S30337	09-23-77	07-26-78		OPEN END CONTRACT
5246	850	PAVE STORAGE AREA	025	VAR	5-22777	02-02-78	04-12-78	7,757.75	
5296	301	PAINT FILE CAB.	006	W008	S30312	05-15-77	06-25-77	24.57	
5501	850	DIST BOX & REWIRE EQ	014	C001	2405	06-05-78	10-03-78	1,270.28	AREA NOT AVAIL
5501	850	DIST BOX & REWIRE EQ	014	C001	2405	06-05-78	10-03-78	1,270.28	AREA NOT AVAIL
5514	713	ENCLOSURE	300	OUT	S41905	06-13-78	09-28-78		
5514	713	ENCLOSURE	300	OUT	S41905	06-13-78	09-28-78		
5584	290	CONCRETE CURB	OUT	OUT	2027	09-28-77	04-14-78		
5619	850	INSTALL A/C	003	060	070	2298	04-11-78	09-12-78	9,385.16 C0081878

AS OF 06/05/79

GODDARD SPACE FLIGHT CENTER
FACILITIES ENGINEERING DIVISION
WORK CONTROL LOG

PAGE
PROGRAM: MRSMD

WORK REQ #	DATE RECEIVED	ORG CODE	BLD	ROOM	<-- DESCRIPTION --->	<-- ENGINEERING --> ENG COORD	DATE FR ENG	<---------- ACCOUNTING/BUDGET ---------> PROC. CNTL #	DATE TO PROCURE	DO # PO #	DO OR PO DATE	<--CONSTRUCTION--> ACTUAL ST DATE	COMPLETE DATE	PR AMOUNT (COMMENTS)
4402	05-04-76	950	019	002	INSTL POWER WATER DR	WAB	03-04-77	07583	09-25-76	2596	09-26-78	10-23-78		8,334.27
												60% COMPLETE 051679		
4402-01								07584	09-25-78	2596	09-26-78			438.66
4402-02								07583	09-26-78	2596	10-02-78			1,113.10
4402-03								070380300	01-05-79	2596	01-18-79			136.18
4402-04								071060300						475.05
4450	05-07-76	230	16W	300	OFF SPACE RENOVATION	WAB	09-29-76	57525	09-30-76	0057	09-30-76	03-14-77	09-08-77	20,000.00
												RALPH PROCES INV 12/29		
4450-01								57525001	09-30-76	0057	09-30-76			680.80
4450-02								07367	03-14-77	0057	03-21-77			132.70
4598	07-13-76	720	200	208	NAV	WAB	06-26-76	57723	07-11-76	525214	09-29-78	02-02-79		1,500.00
												10% COMPLETE		
4598-01								07057	02-15-79	525214	04-12-79			330.00
4687	08-16-76	680	021	117	OFFICE MODIFICATIONS	WAB	08-16-76	57526	10-14-76	0085	11-17-76	01-17-77	09-16-77	6,555.66
												RALPH PROCES INV 12/29		
4687-01								07195	02-16-77	0085	02-10-77			19,581.46
4687-02								07193001	04-13-77	0085	04-13-77			218.43
4719	08-19-76	853	025	113A	SOUNDPROOF BOOTH	WAB	09-26-76	07666	09-14-78	S60432	09-26-78	11-01-78	05-24-79	1,900.00
4719-01								57218	09-14-76	S60432	09-26-78			3,200.00
												MAT 051579		
4816	08-27-76	563	023	E330	VENT. SYST	ADL	02-06-78	57560	05-05-76	2372	05-12-78	08-21-78	04-24-79	13,574.04
4816-01								575600001	06-23-78	2372	07-08-78			90.00
												CO_2 4		
4816-02								575600002	08-03-78	2372	08-21-78			1,433.00
4816-03								07564	01-09-79	2372	01-09-79			269.99
4816-04								575640001	03-26-79	2372	03-28-79			476.35
4945	11-01-76	745	005	W056	EXTEND EXIST. WALLS	JLW	01-24-77	07428	09-14-77	2528	04-19-78	09-26-78		11,275.56
												98% COMPLETE 050279		
4945-01								57514	03-21-78	2528	04-24-78			6,071.96

ATTACHMENT B

SAMPLE OPERATOR INSTRUCTIONS

OPERATING PROCEDURES - WRSFOG1, WRSMR1

PRINTING WRSFOG1 - WORK REQUESTS IN DESIGN
PRINTING WRSMR1 - SUMMARY OF WORK REQUESTS IN DESIGN

1. Insert diskettes in the following manner:

   Program #2 disk in Drive #1
   WRSDATA disk in Drive #2
   WRSWORK1 disk in Drive #3
   WRSWORK4 disk in Drive #4.

2. Key in WRSFOG1 and depress the Return Key.

3. Q1 will display on the screen:

   'ENTER C FOR CONT FORMS, S FOR 1 PAGE'

   Key in "C" and depress the Return Key if you have continous forms in the printer.
   Key in "S" and depress the Return Key if you are using single pages in the printer.

4. Q1 will now display:

   'ENTER R FOR A RANGE, A FOR ALL RECORDS'

   Key in "A" if you wish to print all work requests in design and depress the Return Key. Proceed to step 5.

   Key in "R" if you wish to print only a specific range of work requests in design and depress the Return Key. If you select this option, the Q1 will display on the screen:

   'ENTER BEGINNING WRCN DESIRED'

   Key in the first work request control number you wish to see printed and depress the Return Key. Q1 will then display on the screen:

   'ENTER ENDING WRCN'

   Key in the last work request control number you wish to see printed and depress the Return Key.

   If you have entered an invalid range of WRCN's, the Q1 will display an error message on the screen. Depress the Return Key and go back to the beginning of step 4.

5. Q1 will now begin selection of records from the WRSDATA that meet the above specified conditions. Selected records are then copied to a work area on disk WRSWORK1. When the selection is complete, the Q1 will print the I/O statistics.

6. Q1 will now sort the selected records into project coordinator sequence and print the first report.

7. Following the WRSFOG2 report, the WRSMR1 will automatically print (the report is only one page).

8. When the report is completed, the Q1 will display on the screen:

    'Q1/LITE AT YOUR SERVICE'

RESTARTING:

If the paper jams or the ribbon breaks while the report is printing, do the following:

1. Hit the red reset button on the side of the machine.
2. Pop out all disks from the drives.
3. Turn the machine off.
4. Re-align the paper or replace the ribbon.
5. Key in WRSFOG2 and depress the Return Key.
6. The report should begin printing immediately, followed by WRSMR1.

If a problem occurs before the report has printed, you must rerun the job starting with step 1.

OPERATING PROCEDURES - WRSTFR

TRANSFERRING COMPLETED OR CANCELLED WORK REQUESTS FROM THE ACTIVE FILE (WRSDATA) TO THE INACTIVE FILE (WRSHIST)

1. Execute backup procedures for WRSDATA and WRSHIST.

2. Insert the disks in the following manner:

   Program #1 in Drive #1
   WRSDATA in Drive #2
   WRSHIST1 in Drive #3
   WRSWORK3 in Drive #4

3. Key in WRSTFR and depress the Return Key.

4. Q1 will display on the screen:

   'ENTER C FOR CONT FORMS, S FOR 1 PAGE'

   If you have continuous forms in the printer, key in "C" and depress the Return Key.

   If you have single page forms in the printer, key in "S" and depress the Return Key.

5. Q1 will now display on the screen:

   'REMOVE PROGRAM DISK - INSERT WRSHIST2
   HIT RETURN WHEN DISK IS READY'

   Operator must replace the program disk with WRSHIST2 in Drive #1 and then depress the Return Key.

   Q1 will now begin transferring records. The total process will take about 20 minutes, so be patient.

6. When all records have been transferred, Q1 will print out all I/O statistics and then display on the screen:

   'YOU MUST REMOVE THE WRSDATA DISK
   AND INSERT THE PROGRAM DISK #1
   --ALSO--
   HIT RETURN TO SORT WRSHIST1
   YOU MUST SORT WRSHIST2 UPON COMPLETION
   OF SORTING THE WRSHIST1 FILE'

   The operator can remove the WRSDATA and insert the Program #1 disk and depress the Return Key to sort the WRSHIST1 file.

   Upon completion of the sort, the operator must now type in "SORT WRSHIST2 WRSWORK1" to sort the change order file.

Upon the completion of the second sort, both history files must be removed from the drives.

7. Remove all disks from all drives.

8. Execute backup procedures for WRSDATA and WRSHIST using two different backups from those in step #1.

   Upon completion the Q1 will display on the screen:

   'Q1/LITE AT YOUR SERVICE'

   A new Work Request Number Log should be printed for both the active (WRSDATA) and the inactive (WRSHIST) files, according to the procedure for running the log.