Planning and Scheduling

Planners, Supervisors, and Scheduling

Maintenance Planners and Supervisors

• **Planners**
  – Essential to the program
  – Should be responsible for the planning of 15 (optimum) to 25 (maximum) craftworkers

• **Planners typical job description**
  – Reviews requests for work
  – Visits job site for clarification
  – Confers with requestor
  – Estimates the craft labor required
  – Reserves all stores materials required
  – Orders all non-stock material
**Planners**

- Ensures all resources are available before the work order is scheduled.
- Develops standards for repetitive jobs.
- Develops historical job estimates.
- Develops and tracks craft/crew backlogs.
- Determines labor capacity for schedule.
- Prepares weekly schedule for approval.
- Tracks work orders for completion.
- Keeps completed work order file by equipment number.
- Tracks all equipment information including spare parts and manuals.

**Planner Training**

- Maintenance planners should come from craftworkers who have good logistics aptitudes.
- However, planners need training beyond the skills required by craftworkers.
- They need programs teaching some of the following subject areas:
  - Maintenance priorities
  - Maintenance reporting
  - Project management
  - Inventory management
  - Scheduling techniques
  - Computer basics
Supervisors

- Responsible for overseeing the work of an average of 10 craftworkers.
- Motivate the craft personnel.
- Determine craft/skill/crew for the job.
- Perform safety and quality monitoring of the job.
- Hiring, firing, and pay reviews of the assigned employees.
- Recommend improvements and cost reduction.
- Identify the causes of failures for breakdowns and repetitive repairs.
- Recommend skill levels and training courses for maintenance personnel.

Supervisor Training

- Front line maintenance supervisor positions are filled 70% of the time from craft or planner promotions.
- Good supervisor training programs should be implemented before supervisory responsibilities are assumed.
- Some areas that should be addressed in these programs are:
  - Time management
  - Project management
  - Maintenance management
  - Management by objectives
Maintenance Scheduling

• Matching of maintenance labor and material resources to the requests for the maintenance labor and material resources.

• Flow of scheduling starts with *good plans*, establishing the *status of the work order*, scheduling the work when resources are available, completing the work when scheduled.

• When planning the work order, the planner tracks the W.O. through various statuses. He ensures that the W.O. has cleared all wait codes before the work is established as “ready to schedule.”

Work Order Status Codes

• **Waiting Codes**
  – Authorization
  – Planning
  – Engineering
  – Material
  – Shutdown

• **Work Codes**
  – Ready for Schedule
  – In process
  – Completed
  – Cancelled

• The next step → determine available labor capacity
**Maintenance Labor Capacity**

Total gross capacity  
Total men x Total hours worked  
+ Overtime and/or contract labor  
minus  
Unscheduled emergencies......weekly average  
+  
Absenteism...... weekly average  
+  
Allotment for preventive maintenance  
+  
Allotment for standing or routine work ......use weekly average

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**Craft Backlog**

- Good scheduling also means knowing the amount of work still to be performed by each craft → craft backlog.

- Accurate backlogs involve the open work orders that are ready to schedule, not work that is waiting on something before it can be scheduled.

- A good backlog is 2-4 weeks worth of work.

- To properly manage the workforce, it is necessary to trend backlog over a time period. This helps to identify developing problems and to evaluate attempted solutions
**Maintenance Staffing**

Maintenance staffing levels should be determined by craft backlogs:

\[
\text{Craft backlog} = \frac{\text{Open work orders ready to schedule (total hours)}}{\text{Craft capacity (weekly)}}
\]

**Maintenance W. O. Scheduling Considerations**

- The planner is primarily concerned with the weekly schedule.
- Needs to be aware of the following items:
  - Work priority
  - Work already in progress
  - Emergency and breakdown work
  - Standing and minor work
  - Preventive maintenance work -----due and overdue
  - Actual craft labor available (absentee, vacations, overtime, contract)
  - Craft backlog
Requirements for Scheduling

- Good, accurate estimates
- Good work order system including job instructions, crafts required, required date
- Accurate craft availability
- Accurate stores information
- Accurate contractor information
- Accurate equipment/tools requirements

Maintenance Scheduling

- 80 - 90 % of total work should be scheduled
- Should be planned by experienced technicians
- Should be processed as backlog ---weekly schedule, then daily work
- Must be flexible enough to accommodate emergency work
- Should not be scheduled until ready