
TECHNICAL HANDBOOK FOR
ENVIRONMENTAL HEALTH AND ENGINEERING
VOLUME VI - FACILITIES ENGINEERING
PART 71 - FACILITIES ENGINEERING PROGRAM PLAN

CHAPTER 71-2 DEVELOPMENT

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71-2.1 TRAINING PLAN

A. PURPOSE- The purpose of a training plan is to enable a facilities manager to identify and plan training for subordinate employees so that when implemented, the assigned facilities engineering workload will be enhanced and/or improved.

B. SCOPE

(1) FEPP training plans are the implementation of master training plans developed by supervisors for each of their subordinate employees. The FEPP plan should request reasonable amounts of training for each fiscal year. The likelihood of any one employee being away from his/her job for training three or more weeks per fiscal year are highly unlikely.

a. Service Unit

Identifies the scheduled training courses planned for facilities personnel at the service unit for the upcoming fiscal year.

b. Area Office

Identifies the scheduled training courses for Area office facilities employees for the upcoming fiscal year. The Area plan consolidates the training plans prepared by each of the service units with the plan prepared for the Area facilities employees.

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- (2) Training plans also helps recognize training needs which may be advantageous for the Area or Headquarters to consolidate into training courses at the national or Area level and/or recommend training which may be shared with other Areas.

C. SUBMISSION FORMAT

(1) Service Unit Plan

Exhibit 71-2.1-A outlines a proposed training plan for the upcoming fiscal year. The needs in the plan must be prioritized because the annual requirements for training usually far exceed available resources.

Exhibit Headings

- Course Title
- Instructor
- Location of Course
- Tuition per Person
- Travel and Per Diem Per Person
- Number of Attendees
- Total Costs
- Date of Course
- Duration of Course (Hours)

(2) Area Plan

- a. The format is identical to exhibit 71-2.1-A but it is a consolidation of the service unit plans and the Area facilities employee plan for one fiscal year. Area consolidated plans are also prioritized due to limited resources. Then training outlined in the Area FEPP submission of exhibit 71-3.5-A, Routine Activities, should only reflect the courses of exhibit 71-2.1-A that is approved for the upcoming fiscal year.

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- b. The Area consolidated training plan should include a narrative which describes the Area training philosophy and the criteria used to allocate training funds.
- D. OTHER REQUIREMENTS - At times it becomes necessary to identify training topics for which no specific course and/or location is known. These are topics which would generally be supported if a source for the training was made available or a source could be identified.

71-2.2 FIVE YEAR EQUIPMENT REPLACEMENT PLAN

- A. PURPOSE - The purpose of a five year equipment replacement plan is to enable a facilities manager to plan and implement equipment replacements before failure of the equipment significantly disrupts the operation of the facility.
- B. SCOPE - The plan identifies equipment which, when needing replacement, would significantly impact the annual allocation funding of the service unit if it had to unexpectedly absorb the costs within the normal annual funding allocation.
- (1) FEPP equipment replacement plans should be developed for five year periods with each fiscal year increment outlined separately.
 - (2) The FEPP equipment replacement portion outlined in exhibit 71-3.5-A, Section I, Routine Activities is the implementation of the upcoming fiscal year portion of the master five year plan developed for the service unit. This enables a service unit to forecast replacements over a more reasonable period at a time.
 - (3) The plan identifies equipment which, when needing replacement, would significantly impact the annual allocation funding of the service unit if it had to unexpectedly absorb the cost within its normal allocation.
 - (4) The plan is an itemized listing of real property equipment (building service equipment), and non-clinical personal property equipment under the maintenance responsibility of the facilities engineering program and scheduled for replacement over the next five years.

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- (5) Equipment should be listed in priority order within each fiscal year as requirements generally exceed the needs.
- (6) The FEPP plan should request reasonable amounts of equipment replacement for each fiscal year. Facilities managers therefore need to plan the replacements. The likelihood of being guaranteed receiving funding to replace fifteen air handlers the same fiscal year is highly unlikely. The plan should reflect replacement of three air handlers per year over a five year period.
- (7) Equipment should be limited significant components only:
- a. Building Service Equipment (M&I Funds)
 - Transformers, large breakers
 - Water heaters, boilers, expansion tanks
 - Pumps (return condensate, well water, feedwater)
 - Air handlers, exhaust fans, heat exchangers
 - Chillers, HVAC package units, cooling towers
 - Air compressor for HVAC controls
 - b. Non-Clinical Personal Property (H&C Funds)
 - Dietetic dishwasher, dietetic refrigerator
 - Morgue refrigerator
 - Bed pan washer
 - Laminar flow hood, bio-hazard cabinet hood
 - Medical air compressor, dental air compressor
 - Lawn mower, snow blower, table saw press
 - c. Real and Personal Property (OR Funds)
 - Dishwasher, refrigerator

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- HVAC units
- Hot water heaters
- Boilers
- Lawn mower, snow blower

C. SUBMISSION FORMAT

(1) Service Unit Plan

Sample formats for plans using M&I, FS and QR funds is shown in exhibits 71-2.3-A,B,C.

Exhibit Headings

- a. Service Unit Name - The name should be as designated in the FEDS database and match the PHS real property inventory name. Tribal locations although not part of the inventory should be added to each Area M&I listing for the purposes of this plan. Each Area should designate the various tribal locations into service units using different service unit names as appropriate. When two different tribes have two different programs and they do not operate as one entity, they should each be identified by a different service unit name. The service unit, for the purposes of this section of the FEPP, is the installation receiving the program funds.
- b. Installation Number - Within each service unit, there may be more than one installation (i.e., service unit "A" has a hospital, one health centers and one clinic all geographically in different locations but all operating under one service unit). The installation name is taken from the FEDS database and matches the PHS real property inventory name. Eligible tribal facilities should be handled in the same manner.
- c. Building Number - This is the assigned five digit number taken from the IHS database and matches the PHS real property inventory name. Tribal owned buildings should be designated by the tribal building number or

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use an Area assigned number for each tribal building.

- d. FEDS Number - List the FEDS number identifying the equipment replacement.
- e. Fiscal Year - List the fiscal year the equipment is projected to be replaced.
- f. Item - List the name of the equipment to be replaced.
- g. Description - Provide a brief description of the equipment to be replaced that will allow a reviewer to assess the magnitude of the equipment being replaced. This information is required to determine whether the estimated replacement cost is adequate. See exhibit 71-2.2-A for examples.
- h. Reason for Replacement - Describe why the equipment needs to be replaced. Note: If equipment is being replaced to increase capacity or improve efficiency it is not included in this section of the plan. In those cases replacements are improvements and should compete for replacement as a project in Section II, Projects, exhibit 71-3.5-A.
- i. Total Repairs to Date - Provide a total for all repairs to date found in the Equipment Record Card for the equipment planned for replacement. This total cost needs to be updated annually when this section of the FEPP is prepared from one year to the other until the equipment is approved for replacement.
- j. Current Cost Estimate - Give a current estimated cost to the nearest hundred dollars to purchase and install the equipment.

(2) Area Plan

This is a consolidation of all the service unit equipment replacement plans. The format is identical to that outlined in exhibit 71-2.2-A above. Equipment must be listed in priority order within each fiscal year.

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71-2.3 SERVICE CONTRACTS

- A. **PURPOSE** - The purpose of planning for service contracts is to identify and plan for the workload that cannot be performed with the in-house facilities staff due to lack of staffing, technical capability and/or equipment/tools to perform the work.
- B. **SCOPE** - Development of the plan requires a review of the scope of work of existing service contracts that are currently in place and an evaluation of new equipment that has been purchased since the last FEPP was developed. Each installation typically has a number of service contracts with vendors to provide services for preventive maintenance, inspection, and testing of equipment. This part of the FEPP plans for real property (building service equipment), personal property (clinical and non-clinical) and personnel quarters real property and personal property equipment service contracts.

NOTE:

Warranty of new equipment is limited to repairs due to breakdowns. Preventive maintenance, testing and inspection requirements as required must be accomplished upon delivery and installation on site by in-house staff or under service contracts. Remember to include equipment that may be under this status at the time the FEPP is being developed.

C. **SUBMISSION FORMAT**

(1) **Service Unit**

- a. Real Property/Building Service Equipment funded by the M&I activity. See exhibit 71-2.3-A.
- Personal Property (Clinical and Non-Clinical) funded by the FS activity. See exhibit 71-2.3-B.
- Quarters Real Property and Personal Property funded by the QR activity. See exhibit 71-2.3-C.

(2) **Table Headings**

- a. **Service Unit** - Indicate the service unit covered by the contract. Service unit names are taken from the

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FEDS database and must match the PHS real property inventory names.

- b. Description - Provide a brief description of the work to be done under the service contract. Be descriptive enough that another facilities manager reviewing the data will know what the scope of the work involves (i.e., preventive maintenance, testing, calibrations, inspection, etc.). If the same vendor is performing more than one service, identify each service as a separate line entry. Do not allow the same vendor or the same company to perform maintenance and conduct inspections and tests on the same equipment. The inspector should be used as a quality control on their vendor performing the preventive maintenance. Service contracts are defined as scheduled recurring requirements for accreditation or code compliance. Blanket purchase orders for repairs or material purchases are not to be included in this portion of the FEPP. That type of work should be funded out of bench stock.
- c. Cost - The cost of the service contract should include travel, transportation and overhead costs of the vendor.
- d. Frequency - Indicate the frequency of the work to be performed by the service contract. The purpose of this item is for the Area office to verify that the correct frequency of preventive maintenance, inspection or testing is being contracted. The Area must, in their request to the service unit, require that the service unit identify if they are performing some of the scope of work making the required service contract only partial in lieu of total. Otherwise it would not be possible to evaluate whether the frequency being contracted is correct or not.

Sample frequency codes to use are as follows:

- D = Daily
- Q = Quarterly
- W = Weekly
- S = Semiannually

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- M = Monthly ● A = Annually

Often within the same contract, there will be different frequencies for performing separate tasks. In this case enter each of the frequencies for each part of the contract.

- e. Justification - Provide a reason that justifies (i.e., lack of staff, lack of qualified staff, lack of tools etc.) using a service contractor to perform the work instead of in-house staff. Remember that if lack of qualified staff is given as a justification, then an evaluation should be made to determine if existing personnel can be trained or if additional personnel can be hired on a more economical basis than contracting for the services.

71-2.4 STAFFING WORKLOAD PLAN

- A. PURPOSE - The purpose of preparing a staffing workload plan is to identify the required workload at an installation and determine if the identified workload can be accomplished with the authorized available staffing.
- B. SCOPE
- (1) A tabulation identifies the required facilities engineering workload (i.e., work orders, preventive maintenance, tests, inspections, supervision) by category of work expressed in man hours.
 - (2) A tabulation identifies the required non-facilities workload that has been imposed by management on the authorized facilities engineering staff (i.e., ambulance driving, mail pick up).
 - (3) An analysis is conducted to determine if the available staffing is sufficient to accomplish the required facilities and non-facilities workload. The analysis allows the facilities manager to develop a method of correcting workload deficiencies.
- C. SUBMISSION FORMAT - It is necessary that a clear definition of all the facilities workload be considered to ensure that every

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service unit analyses the same data. It will be necessary to differentiate between the workload that is currently contracted out by service contract and that which is performed by in-house staff.

NOTE:

Work that is contracted must be deducted from the analysis. This is due to the fact that there is no need for in-house staffing for this workload. The contractor furnishes the staffing required for the contract workload.

(1) Maintenance Duties

In addition to the service contracts for real property and building service equipment there will also be a workload requirement for maintenance and operation of real property and building service equipment to be performed by local in-house staff.

Facilities workload includes the following categories:

- a. Preventive Maintenance (In-House) - This workload can be retrieved from the preventive maintenance schedule. This figure is the total preventive maintenance man-hours required to be performed with in-house staff. The contracted preventive maintenance workload must be deducted from this figure.

NOTE:

The frequency of this work can be reduced if the service unit safety committee approves a request submitted by the facilities manager.

- b. Routine Maintenance - This workload can be retrieved from the work order files. This work is the day-to-day work that is requested by departments throughout the facility. The figure is arrived at by averaging the total work orders for each trade category for work performed by in-house staff the previous three fiscal years.

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- c. Testing/Inspecting - This work must be accomplished and it cannot be reduced or eliminated. Some or all of this work may be also contracted out on one time procurement requisitions rather than service contracts. Therefore the workload that is contracted must be deducted from this figure. This figure can be retrieved from the work order files.

- d. Emergency Maintenance - This work is the total emergency work required of the facilities maintenance staff regardless of what caused the emergency. This figure is not part of what is tabulated under routine maintenance work orders outlined above. This figure can be retrieved from the work order files.

- e. Operations - This work is the amount of time spent daily or weekly on operations type duties to accomplish certain tasks that cannot be reduced or eliminated. This figure involves; daily checks of the status of medical gas bottles hooked up to the central manifold, checking the walk-in freezer, checking the status of boilers or furnaces, checking the status of the air conditioning system in surgery, the first thing every morning when the crew reports for work. This figure can be retrieved from the work order files.

- f. Supervision - This work involves the workload for supervision of maintenance personnel, and the workload of administrative personnel responsible for the planning and direction of the facilities engineering department. This work cannot be reduced unless the supervisor performs other duties such as those of a safety officer, accomplishes some of the facilities maintenance workload by himself/herself, transportation duties or other similar duties. This figure can be calculated as this work is not normally tracked by work orders.

- g. Quarters Maintenance - This work is the total of all trade work orders performed on quarters and utilities leading to quarters. This figure is not part of the routine work orders tabulated above for the rest of the installation. This figure can be retrieved from

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the past completed work order files.

- h. Clerical/Administrative - This work is the total clerical man-hours required to support the facilities engineering program. The figure should be tabulated even if the work is currently being accomplished by staff from another department on a part time basis. The work includes such items as; typing, filing, answering the phone, and preparing reports. This figure can be calculated as this work is not normally tracked by work orders.

(2) Non-Maintenance Duties

This is work that is not included in the IHS Resource Staffing Methodology utilized to staff a facilities engineering. This work can be retrieved from the work order files. The following outlines typical work included in this category.

- a. Ambulance Driving and other Transportation - This work is the transportation workload for transportation imposed on facilities maintenance employees. The ambulance driving is tabulated separately from the other transportation merely to distinguish the workload from other type of driving. If a mechanic drives a vehicle to another site to perform routine maintenance at another site it should not be considered transportation as the maintenance work could not have been performed by a motor vehicle operator. Transportation in that instance is part of travel required to perform the trade work.
- b. Housekeeping - This workload is the housekeeping workload imposed daily or occasionally on facilities maintenance employees due to housekeeping staff vacancies or shortage of housekeeping staffing. This is not the normal housekeeping workload of housekeeping personnel at the installation.
- c. Clinical Engineering (Biomedical) - This figure is the workload imposed on facilities maintenance employees. This could be assisting clinical engineering personnel to perform their workload or permanent clinical

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engineering workload assigned to facilities maintenance employees. An example of the latter is the maintenance of dental hand pieces assigned to facilities maintenance employees at some service units.

- d. Mail - This figure is the clerical and/or transportation workload imposed on facilities maintenance employees to pick up and/or deliver mail daily or occasionally from the service unit to the U.S. Post Office.
- e. Safety Officer - This figure is the workload for those facilities managers who also serve as the installation Safety Officer in addition to managing the facilities department. This are not safety duties related to the occupational health and safety duties required of every facilities engineering supervisor for his/her own subordinate staff.
- f. Other - This figure is optional for a facilities manager to tabulate any other type of maintenance work that is unique to the operation which has not been outlined above but nevertheless impacts on the maintenance department's workload.

(3) Man-Hours

- a. Each service unit defines the annual maintenance requirements in man-hours (not including work that will be accomplished by service contracts) for the above categories. The man-hour requirements are then converted into FTE.
- b. Each full time employee is equivalent to 2,080 work hours per year (52 weeks at 40 hours per week). It is necessary to deduct an average allowance for holidays 10 @ 8 hours each, annual leave (3 weeks @ 40 hours each), sick leave (3 weeks @ 40 hours each).

Available man hours for one FTE is equal to:

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One FTE = 2080 available hours
- 80 holiday hours
- 120 annual leave hours (average)
- 80 sick leave hours (average)
- 40 miscellaneous hours (e.g., training)
= 1760 hours available to perform work
at 100% efficiency.

- c. Efficiency has been defined by the government through intensive studies as 70% of available time. An adjustment for efficiency man-hours must be made.

The average worker is therefore;

1760 hours x .70 efficiency

= 1232 hours available productive time

This is the value used to determine staffing.

D. COMPUTATION METHODOLOGY

(1) Analysis

The intent of the manpower plan is to document all the facilities program workloads required at each service unit and then allow it to be compared with the available manpower. If the available manpower is less than what is required some workload cannot be accomplished. The analysis in this portion of the workload will document what is the work which will not be accomplished. The facilities manager must either inform management of the work that will not be accomplished or increase the number of service contracts to accomplish the work. Remember, not accomplishing work required by codes could jeopardize accreditation and may also violate law thus generating legal implications. Exhibit 71-2.4-A illustrates the format for presenting this information.

(2) Conclusion

It is common for the service unit FTE requirement to be more than the available maintenance staffing level. This is because the limited facilities budget usually controls the

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number of maintenance employees. It is therefore important to identify not only the number of personnel available to perform maintenance, but also the number of personnel required for maintenance.

AREA TRAINING PLAN

COURSE TITLE	INSTRUCTOR	LOCATION OF COURSE	TUITION PER PERSON (\$)	TRAVEL AND PER DIEM PER PERSON (\$)	NUMBER OF ATTENDEES	TOTAL COSTS	DATE OF COURSE	# (HRS)
JCARO/PTSM	American Hospital Association	Area Office Tucson, AZ	400	300	12	8,400	11/3-7/93	24
Boiler Maintenance	Cleaver Brooks Boiler Company	Denver Hilton Denver, CO	600	300	4	3,600	2/24-25/93	16
Steam Trap Maintenance	Grinnel Steam Trap Company	Albuquerque IHS Hospital	25	210	3	705	3/11/93	3
Facilities Orientation I	Headquarters OHSR/DPR/FED	Winecock Inn Albuquerque, NM	0	900	12	10,800	4/3-9/93	36
HVAC Controls	Johnson Controls	Holiday Inn St. Louis, MO	700	150	4	4,400	4/3-4/3	24
NFPA 99	National Fire Protection Association	IHS Health Center Talequah, OK	250	225	20	13,300	9/1-9/93	24
Testing Fire Alarm System Components	Genovell Corporation	Holiday Inn East Des Moines, IA	100	0	14	1,400	8/24/93	8
HVAC Air Balance	SEACOMA	Holiday Inn Seattle, WA	600	0	2	1,200	6/2/93	8
Electrical Maintenance	General Electric Corporation	General Electric Plant No. 3 Schenectady, NY	600	1200	2	4,800	7/17-19/93	24
Testing Vacuum Breakers	Licensed Plumber Local No. 1234	IHS Hospital Tulsa, OK	50	0	22	1,100	8/3/93	3
Blueprint Reading (Correspondence)	Phoenix Votech Institute	Phoenix, AZ	100	0	4	400	8/3-20/93	40

OTHER COURSES FOR
WHICH NO SOURCE IS KNOWNNUMBER OF
PARTICIPANTS

- | | |
|--|----|
| (1) FEDS Training | 3 |
| (2) National Electrical Code | 9 |
| (3) Measuring Emissions (Boilers/Incinerators) | 16 |
| (4) Incinerator Operator Certification | 16 |
| (5) Electrical Maintenance in Hospitals | 14 |
| (6) Basic Plumbing | 11 |
| (7) How to Manage a Preventive Maintenance Program | 10 |

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AREA CONSOLIDATED 5 YR EQUIPMENT REPLACEMENT PLAN

FISCAL YEAR 1995

(1) Service Unit Name (2) Installation Number (3) Building Number (4) FEES Number (5) FY	(6) Item (7) Description	(8) Reason	(9) Total Repairs to Date	(10) Cost
(1) Sells (2) (3) (4) (5) 93	Pump, Return Condensate 80 gpm, 240 v, 3ph, 30 ft head	Unit is only 6 yrs old but repairs will soon exceed the replacement costs.	\$5,500	\$9,500
(1) Sisseton (2) (3) (4) (5) 93	Boiler, Hot Water, 800 #/hr, Dual Fuel	Recommended replaced by the boiler inspector.	\$9,000	\$78,000
(1) Santa Fe (2) (3) (4) (5) 94	HVAC Package Unit, (7) 10 Ton, Roof Top, 11000 cfm, 4" SP	Unit was badly damaged by tornado and is beyond repair. Repairs will exceed replacement costs.	\$11,000	\$16,000
(1) Eastern Michigan (2) (3) (4) (5) 95	Chiller, Centrifugal, 150 Ton R- 22, 440V, 3ph	Unit was damaged in the fire incident of 6/92. Factory will not warrant repairs. The shell buckled during fire. Age is 15 yrs.	\$28,000	\$98,000
(1) Omaha Winnebago (2) (3) (4) (5) 96	Transformer, 440/220 volt, delta- wye, air cooled, 25 kva	Unit constantly overheats causing power failures to surgery and radiology, pcv should have been replaced 10 yrs ago.	\$0	\$47,000
(1) Barrow (2) (3) (4) (5) 97	Lift Station, Dual Unit, 200 gpm, 60 ft head, 220 v, 3ph	Unit added to quarters load temporarily during construction. Not maintained for 18 months. Replace of entire facility will be out.	\$21,000	\$27,000
TOTAL COST FY 1995				\$275,500

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**SERVICE CONTRACTS (REAL PROPERTY)
 MAINTENANCE AND IMPROVEMENT FUNDING**

(A)	(B)	(C)	(D)	(E)
SERVICE UNIT	DESCRIPTION	COST (\$)	FREQUENCY	JUSTIFICATION
Ft. Smith	Elevator Test Safeties and Inspection	1200	A/3 yr	(1)
	Elevator (PM)	3900	M	(2)
	Combustion Controls (PM/Calibrate) (Boiler - Incinerator)	2000	Q	(2)
Crow Creek	Emergency Generator (PM /5 year test)	4000	A	(2,3,4)
Rosebud	HVAC Controls (PM)	9300	Q	(2)
	Chiller (PM/Start-up)	4200	S	(2)
	Fire Alarm (Test/Inspect) Sprinkler (Test) Extinguishing Hood (Test/Inspect)	4000 1200 1200	Q Q S	(5) (6) (6)
Eagle Butte	Roof Inspection (Thermographic)	1600	5 yr	(2)
	Elevator (PM)	6000	M	(2)
Sisseton	Elevator (PM)	4000	M	(7)
	Elevator (Test/Inspect)	2000	5 yr/A	(7)
Pine Ridge	HVAC Controls (PM)	9500	M	(2)
	Emergency Generator (PM)	6000	M	(5)
TOTAL				

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EXHIBIT 71-2.3-B

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SERVICE CONTRACTS PERSONAL PROPERTY (NON-CLINICAL)
FACILITIES SUPPORT FUNDING

(A)	(B)	(C)	(D)	(E)
SERVICE UNIT	DESCRIPTION	COST (\$)	FREQUENCY	JUSTIFICATION
Ft. Smith	Medical Air (PM)	800	A	
	Fire Extinguisher (Test/Inspection)	1,200	7 yr	(1)
	Steam Sterilizer (PM)	600	A	(4)
Crow Creek	Steam Sterilizer PM	400	Q	(7)
Rosebud	Fire Extinguisher (Test/Inspection)	1,300	A/5 yr	(1,4)
	Snow Removal	4,200	As Needed	(6)
	Grounds Maintenance	3,200	M	(6)
Eagle Butte	Facilities Xerox (PM)	500	Q	(7)
	Steam Sterilizer (PM)	800	Q	(7)
Sisseton	Dietetic Dishwasher (PM)	400	Q	(6)
	Fire Extinguisher (Test/Inspection)	1,100	5 yr/A	(1,4)
Pine Ridge	Dietetic Dishwasher (PM)	800	Q	(6)
	Fire Extinguisher (Test/Inspection)	1,300	7 yr/Q	(1,5)
TOTAL				

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EXHIBIT 71-2.3-C

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**SERVICE CONTRACTS (REAL & PERSONAL PROPERTY)
QUARTERS RETURN FUNDING**

(A)	(B)	(C)	(D)	(E)
SERVICE UNIT	DESCRIPTION	COST (\$)	FREQUENCY	JUSTIFICATION
Ft. Smith	Furnace and AC (PM)	800	A	(6)
	Fire Extinguishers, Smoke Detectors, Fire Alarm (Test/Inspection)	600	5 yr/Q	(7)
	Grounds Maintenance	2000	M	(6)
Crow Creek	Furnace (PM)	600	A	(6)
Rosebud	Snow Removal	2300	As Needed	(6)
	Fire Protection Services	8200	Daily	(2)
	Fire Extinguisher, Smoke Detectors, Fire Alarm (Test/Inspection)	3500	Q	(1,2)
Eagle Butte	Snow Removal	4000	As Needed	(6)
	HVAC (PM)	2000	Q	(5)
Sisseton	Grounds Maintenance	2500	M	(7)
	Snow Removal	3000	As Needed	(7)
Pine Ridge	HVAC (PM)	3250	M	(6)
	Fire Protection Services	8100	As Needed	(1)
TOTAL				

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SERVICE CONTRACT
FOOTNOTES

- (1) This work must be accomplished by State licensed personnel.
- (2) In-house staff does not have the required technical qualifications to perform this type of work. It is much better to assure this work is performed by personnel who perform this work on a daily basis.
- (3) Service Unit performs weekly inspection and monthly test.
- (4) In-house staff accomplishes this work on a monthly basis. A contractor is utilized annually as a quality control measure on the in-house staff.
- (5) In-house staff is qualified to perform this work but the existing workload does not allow absorbing these duties.
- (6) The service unit does not have sufficient staff to perform this work.
- (7) This site has no in-house staff. Repair work is accomplished by the service unit hospital facilities staff 60 miles away. All testing and inspection work is performed by service contract to offset the staffing problem.

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STAFFING WORKLOAD PLAN

MAINTENANCE ACTIVITIES	MAN-HOURS NEEDED TO ACCOMPLISH THE REQUIRED WORKLOAD	MAN-HOURS AVAILABLE TO ACCOMPLISH THE REQUIRED WORKLOAD
Preventive Maintenance	4954	1460
Routine Maintenance	5500	4860
Carpentry	880	880
Electrical	1760	1760
Mechanical	1320	1320
Painting	410	0 (1)
Plumbing/Pipefitting	470	470
Refrigeration	210	210
Grounds	440	220 (2)
Emergency Maintenance	221	221
Operations (Equipment Only)	719	719
Quarters Maintenance	1850	1232
Supervision	(3) 924	924
Clerical (Secretary)	616	440
SUBTOTAL MAN-HOURS	(4) 14,784	(4) 9856
SUBTOTAL FTE	12	8

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STAFFING WORKLOAD PLAN

NON - MAINTENANCE ACTIVITIES PERFORMED BY FACILITIES MAINTENANCE STAFF	MAN-HOURS NEEDED TO ACCOMPLISH THE REQUIRED WORKLOAD	MAN-HOURS AVAILABLE TO ACCOMPLISH THE REQUIRED WORKLOAD
Ambulance Driving	120	120
Transportation	240	240
Housekeeping	1936	1936
Clinical Engineering (Biomedical)	440	440
Mail Pickup	80	80
Other (Specify)		
Safety Officer	308	308
SUBTOTAL MAN-HOURS	3696	3696
SUBTOTAL FTE	3	3
Maintenance FTE (Exhibit 71-2.4-A)	12	8
Non-Maintenance FTE (subtotal above)	3	3
TOTAL FTE	15	11
TOTAL MAN-HOURS	18490	13552

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STAFFING WORKLOAD PLAN
FOOTNOTES

- (1) Painting by in-house staff is not critical required work. The painting workload can be contracted out rather than performed in-house. This is the reason the required workload is shown less than the available workload in trying to conserve staffing man-hours.
- (2) Grounds maintenance by in-house staff is not critical required work. This is the reason it will not affect the operation if it is reduced by mowing less frequently
- (3) In this example the facilities manager is also the safety officer for 25% of his or her time. This is the reason that the total available time is divided between the available maintenance duties in exhibit 71-2.4-A and the non-maintenance duties shown on exhibit 71-2.4-B.
- (4) Divide or multiply by 1232 hours because that is the amount of productive time available from each employee. Remember the workloads above were based on actual man-hours required to perform the work.

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STAFFING WORKLOAD PLAN
FACILITIES MANAGER'S ACTIONS

The required preventive maintenance in the example above had to be reduced by approximately 80% as a direct result of allowing all other mandatory workloads (with the exception of painting and grounds maintenance which can be reduced sometimes without adverse impact) to be accomplished.

The facilities manager must therefore in priority order implement one or a combination of the actions outlined below:

- (1) Review the preventive maintenance program to see if possibly the current overall frequency of PM can be modified (decrease the frequency of some of the equipment) to accommodate the PM shortfall or;
- (2) Request more service contracts in the FEPP to cover the PM shortfall workload or;
- (3) Request additional staffing from management to accomplish the required workload, or
- (4) Inform management in writing of the workload that will not be accomplished due to inability to accomplish the workload reduction with all or part of the above three previous alternatives.