



**PUNYASHLOK AHILYADEVI
HOLKAR SOLAPUR UNIVERSITY,
SOLAPUR**

MAINTENANCE MANUAL



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CHAPTER 1

Maintenance

Building maintenance is work undertaken to keep, restore or improve every facility i.e. every part of a building, its services including Horticulture operations to a currently acceptable standard and to sustain the utility and value of the facility.

The objective of maintenance is: -

- To preserve machinery, building and services, in good operating condition.
- To restore it back to its original standards, and
- To improve the facilities depending upon the development that is taking place in the building engineering.

In spite of recent improvements in building technology all the buildings deteriorate from the time they are completed. The rate of deterioration depends upon a number of factors. Not all the factors are under the control of the occupants. During the design and construction stages, the following become essential:-

- Right choice of material.
- Suitable construction techniques.
- Adequate specifications for construction and installation work.
- Effective supervision throughout construction and rectification of defects prior to final certification.
- Provision of adequate space for landscaping with proper design.

In fact the Punyashlok Ahilyadevi Holkar Solapur University, Solapur provide for obligatory maintenance by the original contractor in the initial stages for a period of six or three months, depending upon the nature of the work, immediately following the date of completion as there are bound to be teething troubles in any new construction. If these are attended to, the maintenance pressure will be reduced. Where there are inherent defects both in design and construction the maintenance cost raises disproportionately to a higher level and the anticipated life of building is reduced.

Maintenance aims at effective and economic means of keeping the building and services fully utilizable. It involves numerous skills as



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To maintain the aesthetics of buildings and services as well as to preserve their life, some works like white washing, distempering, painting, cleaning of lines, tanks etc. are carried out periodically.

- **Special Repairs**

Such works are undertaken to replace the existing parts of buildings and services which get deteriorated on ageing of buildings. It is necessary to prevent the structure & services from deterioration and restore it back to its original conditions to the extent possible.

- **Additions and Alterations**

The works of additions/alterations are carried out in buildings to suit the special requirements of occupants for functional efficiency. The facilities are updated by carrying out such works.

- **Preventive Maintenance**

Preventive maintenance is carried out to avoid breakdown of machinery and occurrence of maintenance problems in buildings and services. Works of preventive maintenance are carried out on the basis of regular inspection/survey.

- **Maintenance of Bungalows (Hon'ble vice chancellor)**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur is maintaining campus these includes Hon'ble vice chancellor residences etc. Special Care has been taken for maintenance of above residences.

- **Means of effecting maintenance**

- **Repairs timates**

Annul repairs and maintenance estimates for building and Services are prepared as per requirement in the beginning of the year. The estimates cater to day to day repairs and annual (periodical) repairs and should include the whole expenditure on cost of labour (regular work- charged staff and on muster roll), cost of materials required for day to day works, cost of work being carried out through work orders and contracts, municipal and other taxes, if any, payable by the Government/party, anticipated to be incurred the maintenance of



influenced by occupancy and the performance level expected of a building. Programming of works to be carried out to keep the building in a good condition calls for high skills. Feedback from maintenance should also be a continuous process to improve upon the design and construction stages.

In the Manual wherever the maintenance of building is referred, it will include the associate services also.

- **Maintenance Services:**

These include primarily operations undertaken for maintaining proper condition of buildings, its services and works in ordinary use. The use for which buildings are designed is a prime factor in determining the requisite standard of care.

Excessive maintenance should be avoided. At the same time, maintenance should ensure safety to the occupant or the public at large and should comply with the statutory requirements. The need also depends upon intensity of usage.

The repair works are classified in under mentioned categories:

Day to day

repairs/service

facilities Annual

repairs

Special repairs

In addition to above the following works are also executed by the maintenance wing of Punyashlok Ahilyadevi Holkar Solapur University, Solapur as per guideline prescribed by Government of Maharashtra.

- **Day to Day Repairs**

Day to day repairs are carried out by engineering section in all the buildings under its maintenance on the basis of day to day complaints received

- **Annual Repairs**



The rounding off should be done at the level of Sub-division and a fraction of less than half ignored and half or more than half treated as one.

- **Through contracts**

The annual repair work such as white washing, painting, petty works such as replacement of glass panes, repairs to plaster, changing roof tiles etc. are generally carried out through contract. The special repair works such as regarding, laying of water proofing treatment, repair of water supply pump sets, equipment's and accessories of A/C plants, Audio/Video conference systems, sub station equipment's,

DG sets lifts are of good magnitude in financial terms, hence these are generally carried out through contracts.

- **Register of Buildings**

Engineering section should maintain a Register of buildings up to date. The Engineer should certify to that effect at the end of every financial year after ensuring that necessary additions in the cost and in structures are made up to date. This certificate should be furnished by him to the Registrar every year in the month of July.

- **Safety of Buildings**

- All Buildings/structures are required to be inspected once a year by the Junior Engineer in-charge to ensure that the building/structure is not unsafe for use. In case of electrical and other installations, the Engineer should inspect the same and record a certificate to that effect. The Engineers are also required to inspect such structures/installations twice a year and record certificates to that effect.

- In case of any deficiency found in the structure/installation necessary report should be made to higher authorities and immediate steps taken to get the same inspected by the University Engineer and further action taken to remedy the defects. The officers will also inspect important buildings/Gardens once a year. He shall bring to the notice of his Building and works committee cases where he has reasons to doubt the



buildings in question. The total estimated cost of maintenance of buildings /structures during the year should be within the prescribed limits as approved by the body concerned from time to time both for annual repairs and special repairs.

- **Engineering Section/Substation**

Punyashlok Ahilyadevi Holkar Solapur University, Solapur has been assigned for receipt and disposal of maintenance complaints which are made by the occupants. Usually Junior Engineer is in-charge of the above sections.

- **Modalities of maintenance**

The maintenance works are undertaken through one of the following:-

- Directly employed staff
- Through Contracts

Whether the work should be carried out through contract or own work force is decided on the nature of the following:-

- Type of work
- Amount of work
- Expediency or urgency.

- **Through directly employed labour:-**

Directly employed labour is the most appropriate for routine day to day maintenance. This comes under the following two categories:-

Departmental labour: The cost of establishment due to workers such as their pay, allowances etc. are directly charged to the maintenance work.

In future there would be further recruitment to the categories of Blacksmith and Upholster. The existing incumbents of these two categories will however continue to hold their respective posts, till vacated on account of promotion, resignation, termination of service, retirement, and death or otherwise.



CHAPTER 2

Engineering Section

Complaint Register

Complaint Register is an important document maintained at engineering section. All complaints received at engineering section are entered in the Complaint Register (Annexure-1) and these are closely watched to ensure that the complaints are attended to as expeditiously as possible. There may be different registers for different disciplines for the convenience of concerned Junior Engineer/Garden superintendent.

For maintaining the Complaint Register

- Every complaint shall be assigned a serial number. Time of lodging of complaint shall be invariably recorded by the Receptionist. The complainant shall be intimated the complaint number and the likely time frame for attending the complaint for his reference.
- All complaints shall be entered in the register. Civil, Electrical complaints shall be entered in different registers.
- First entry in the complaint register on any day shall start on a newpage.
- As far as possible, the occupants shall be asked to indicate the nature of complaints to the attendant at Service Centre, so that the right person is deputed for the job and he carries with him necessary tools and materials. In many cases, the complaints are vague and the workmen have to make more than one trip to the house, to find out the nature of work and the tools and materials required. This wastage of man power should be avoided.
- Occupants shall be advised to register their complaints invariably with the Engineering Section. The Occupants may be advised to approach the senior officers in the Department only in cases where the complaints are not attended to within a reasonable time or the work has not been done satisfactorily. They shall be asked to quote the complaint number and date, so that the complaint could be investigated.

- **Disposal of Dismantled Material**



structural soundness of any building/structure/installations and the latter will take such action, as he considers necessary.

- In case it is decided to demolish such unsafe building, it should be disposed of without land by auction under the powers vested in competent authorities.

- **Cleanliness in the Campus**

Cleanliness will be maintained in the Campus. Malba accrued from the execution of repairs in residences/buildings will not be allowed to stay at the place of work. Suitable points will be identified in the localities where malba generated from the day to day work will be stored by the departmental workers or the workers of contractors. It will be ensured that after work, malba is collected from the work place and deposited at the identified spot. Suitable provision will be made in the agreement for lifting of malba periodically from this identified spot. Safeguard will be taken that occupants do not throw garbage on this malba otherwise it would create unhygienic conditions for the residents.

Any leakage from the water supply line, sewers or unfiltered water supply line noticed in the campus will be repaired immediately. Water will not be allowed to stagnate on the roofs, courtyards, road side to act as breeding place for mosquitoes.

All precautions should be taken to keep the colonies neat and clean. In case unhygienic/health hazardous conditions are noticed in the portion of areas/service maintained by local bodies, the same will be reported to them and pursued for action. Overhead tanks will be provided with lockable covers and Mosquito proof couplings. The occupants will be advised against storage of water in coolers not in use and apply Mosquito repellants in the Cooler's pads etc. to check spread of Malaria.

- **Monitoring of maintenance**

For effective maintenance and achieving client satisfaction; it is necessary to monitor the maintenance complaints at various levels.



Maintenance is a continuous process and lot of dismantled material is generated in this process. Dismantled material should not be allowed to be accumulated in large quantity and for more periods.

It occupies lot of valuable space in the engineering section, which otherwise could be put to use for storing serviceable material. Dismantled material when stored for longer duration gets deteriorated and loses its worth. Thus, in addition to blockage of space it causes revenue loss to the University by way of less realization of sale proceeds of the dismantled material.

Also it gives unsightly look as the dismantled material is seen scattered in the compound of Engineering Section. Most of the dismantled material can be survey reported by the University Engineer. It is the responsibility of Junior Engineer that Survey Reports of the dismantled material are sent to the University Engineer periodically in time and ensure that valuable space at the Engineering Section is not occupied.



CHAPTER 3

Day- Day and Annual Repairs

Day to day repairs

Day- Day repairs are carried out by Punyashlok Ahilyadevi Holkar Solapur University, Solapur in all the buildings under its maintenance. The works which are to be attended on day to day basis such as removing chokage of drainage pipes, man holes, restoration of water supply, replacement of blown fuses, repairs to faulty switches, watering of plants, lawn mowing, hedge cutting, sweeping of leaf falls etc. Are attended under day to day service facilities. The purpose of this facility is to ensure satisfactory continuous functioning of various services in the buildings. These services are provided after receipt of complaint from the users at the respective engineering section Complaints of periodical nature like white washing, painting etc. Which are usually got attended through contractors and cannot be attended on daily basis is transferred to register of periodical repairs.

Annual Repairs

The works of periodical nature like white washing, color washing, distempering, painting etc. are called annual repair works and these are generally undertaken through system of contracts.

The periodicity of applying white washing and color washing for a building has been laid down by the Government. The periodicity is two years for white washing and color washing and three years for painting. In addition, works such as patch repair to plaster, minor repairs to various items of work, replacement of glass panes, replacement of wiring damaged due to accident, replacement of switches, sockets tiles, gap filling of hedges/perennial beds. Replacement/Replanting of trees, shrubs,



transferred to this register. From this register/records of the particular premises appropriate information shall be passed on to the complainant about the admissibility of the request and the likely time it shall require for the compliance.(Annexure-5)

CHAPTER 4

Special Repairs

As the building ages, there is deterioration to the various parts of the building and services. Major repairs and replacement of elements become inevitable. It becomes necessary to prevent the structure from deterioration and under wear and tear as well as to restore it back to its original conditions to the extent possible.

The following types of works in general are undertaken under special repairs

- White Washing, Color washing, distempers etc., after completely scrapping the existing finish and preparing the surface afresh.
- Painting after removing the existing old paint from various members.
- Provision of water proofing treatment to the roof. All the existing treatments known are supposed to last satisfactorily only for a period of about ten years.
- Repairs of internal roads and pavements.
- Repairs/replacement of flooring, skirting, dado and plaster.
- Replacement of doors, window frames and shutters. Replacement of door and window fittings.
- Replacement of water supply and sanitary installation like water tanks, WC cistern, Wash basins kitchen sinks, pipes etc.
- Re-grassing of lawns/grass plots within 5-10 years.
- Renovation of lawn in 5-6 years.
- Replanting of hedges in 8-10 years.
- Completely uprooting and removing hedges/shrubbery.
- Replanting of
 - Rose beds in 5-6 years.
 - Perennial beds in 5-6 years.
 - Canna beds in 1-2 years.
- Shifting of any garden feature from one site to another within building.



painting of tree guards, planting of annual beds and trimming/pruning of plants etc., which are not emergent works and are considered to be of routine type, can be collected and attended to for a group of houses at a time and particular period of financial year, depending upon the exigency. Such works can be done under day to day repair also.

Following guidelines shall be followed for planning and execution of Annual repair works.

- The total estimated cost of maintenance of a building/ structure during a year shall be within the prescribed limits as approved by the Government from time to time, for Annual repairs.

These may be suitably increased by the approved maintenance cost index in the relevant year.

- Programmer for carrying out annual reports shall be drawn up at the commencement of each financial year.
- The annual survey of the buildings shall be such as to highlight defects of structural nature in the buildings which require personal investigation by the University Engineer
- The entire exercise of finishing under annual repair should be carried out in a professional manner. Before sanctioning of estimate/invitation of tenders, it should be ensured that all defects like dampness of walls, damage to RCC, brick work and plaster are removed in advance, so that the building looks renovated and presentable for sufficient time after annual repairs.
- Payment for annual repairs is generally made on the basis of standard measurements and as such, there should not be lack of supervision on the part of the Departmental Officers. The Junior Engineer shall make it a point to physically inspect 100% of the buildings where annual repairs are to be carried out. The University Engineer shall carry out personal inspection to the extent of 50% and 25% respectively. The JE shall maintain a register indicating the number of residences where annual repairs are to be carried out, dates of his inspection and his observations regarding the quality of the works. The results of the inspection of The University Engineer shall also be recorded in the same register.

- **Register of periodical repairs**

Complaints of periodical nature like white washing, painting etc. which are usually got attended through contractors and cannot be attended to on daily basis are



Few pages shall be allotted separately to each of these groups in the register and an index shall be prepared in the beginning of the register. The complaint of special repair nature shall be transferred from the complaint register to the relevant group in this register. All details about the complaint shall be properly filled in the columns of the register.

Authenticity of Special Repairs

Any work of Special Repair to be undertaken in the division has to be certified by the University Engineer. The University Engineer has to verify himself the necessity of undertaking Special Repair to any item of the building. Estimates of Special Repairs of course, will be initiated by Junior Engineer but University Engineer. Before accord of approval at his level or sending it to higher authorities will record in writing in the body of the estimate that the necessity has been verified by him.

There should not be too many estimates for Special Repairs in a subdivision. As far as possible, number of estimates should be restricted to number of identified subheads as indicated in the register of Special Repairs. In that case it may be possible that one Special Repair Estimate is operated by more than one JE in the sub division.

Extra Ordinary Special Repair

When expenditure on Special Repair to a particular building is in excess of the permissible yardstick of Special Repair, the same come under the category of Extra Ordinary Special Repair. Expenditure on Special Repair up to permissible li mi t can be incurred by the University Engineer beyond the permissible limit however The University Engineer has to have the approval of the higher authorities.

CHAPTER 5

Additions/Alterations

Two types of Additions/Alterations are carried out in nonresidential buildings. Addition/Alterations are to be carried out to suit the special requirement of occupying department for functional efficiency. Such works of Addition/ Alterations are carried out at cost of occupying department after



The building services fixtures including internal wiring, water supply distribution system etc. is expected to last for 20-25 years. There afterwards it may be necessary to replace them after detailed inspection.

Electrical special repairs in general are whole sale replacement of the wiring and the electrical installations. Earthing is also to be attended. Life of various Electrical Equipment's/installations etc.,

The expected economic life of the building under normal occupancy and maintenance conditions is considered to be as below:

(i)	Monumental buildings	100 years.
(ii)	RCC Framed construction	75 years
(iii)	Load bearing construction	55 years.
(iv)	Semi- permanent structures	30 years
(v)	Purely temporary structures	5 years

The life of the building mentioned above is only indicative and it depends on several factors like location, utilization, specifications, maintenance and upkeep/care taking.

The replacement, renovation and major repairs become inevitable as the life of all the components are not identical.

All the three categories i.e. day - day, annual and special repairs/services are interrelated. Neglect of routine maintenance and preventive measures lead to more extensive periodical maintenance and in the long run major repair or restoration which could have been avoided or postponed.

- **Register of special repairs**

Complaints of special nature repairs, which cannot be attended on daily basis, shall be transferred to this register. The special repairs to buildings shall be divided in following six groups: (Annexure-4)

- Concrete work.
- Masonry works including plaster, flooring and brickwork.
- Woodwork.
- Steelwork.
- Sanitary and Water supply.
- Water proofing treatment.
- Electrical wiring and fittings



- Providing some garden structures like pergolas, arches, GI pipe frames shelters, seats and water body etc.
- Digging of new tree /shrub pits, planting beds within existing garden area or changing the situation of beds, kitchen garden, lawns etc.

In Horticulture, the works of additions and alterations shall be carried with the approval of competent authorities as per the powers delegated to them and on availability of funds.

Timely communication and coordination shall be made by the discipline if their work taken up by it is likely to affect other disciplines.

CHAPTER 6

Preventive Maintenance

Preventive maintenance is carried out to avoid the breakdown in case of machinery or occurrence of maintenance problems in buildings and services. In case of buildings preventive maintenance against seepage for example, is necessarily to be carried out. Preventive maintenance however depends largely on routine inspection/survey of the buildings.

- **Accessibility for Maintenance**

It is necessary that the place to be maintained is capable of being reached for maintenance to be carried out. Access varies from day to day needs to access for a trained and experienced man to attend to a maintenance problem.

In some of the structures regular shafts have been provided for water supply and sanitary installations. The shafts are too tight and there is no working space for workman. The problem is compounded by inadequate light in the shafts. Not only the elbow space has not been provided but there is no working platform for workman. The workmen refuse to attend to leakages and repair pipe lines in such circumstances. It is necessary to provide shafts with access/working platform for the work men to attend to repairs.

Replacement of glass panes in the windows have become another problem. In general the windows open outside and putty is also placed



ascertaining the technical feasibility. Some Addition/Alterations are carried out by Punyashlok Ahilyadevi Holkar Solapur University, Solapur themselves as a general requirement for better functioning of offices located in the office complex. In case of residential buildings, some Addition/ Alterations are carried out by Punyashlok Ahilyadevi Holkar Solapur University, Solapur keeping in view the safety of buildings, approach to buildings, augmentation of services etc. Which are beneficial to all residents in general works of addition/alterations are also carried out in residences at the request of occupants for providing facilities in the residences which otherwise are within the yardstick of facilities for those type of quarters but were not provided at the time of original construction. Such Addition/Alterations are carried out on payment of certain percentage of estimated cost of providing the facility.(Annexure-6)

No additions/alterations once carried out to any Govt. residence except temporary prefab works purely related to special security aspects shall, however, be removed upon the vacation of these houses by the "allot tee concerned." Under mentioned points shall be observed while carrying out addition/alterations in government buildings:

- No addition/alteration shall be carried out to permanent public buildings without the concurrence of the Chief Architect/Senior Architect in writing except for the amenities like provision of wash basin or sink etc.
- The allot tee shall be asked to fill up a form as at Annexure-11. Counterfoil of the form shall be returned to the allot tee duly signed by the acknowledgement of the receipt of the application.
- The work of addition/alteration shall not be taken up as a matter of rule but as exception since the availability of resources is limited.

(v) 'No non-usability' certificate in respect of houses where works of addition/alterations have been taken up at request of allot tee shall be issued except when such works render the house really unusable.

Works of additions/alterations on Horticulture side can be carried out at the request of occupants depending upon the requirements. Such works are:-

- Changes in length and design of hedges, shrubbery, planting beds and rockeries etc. Making some Changes in basic design of gardens/lawns by providing Mounds, undulations, rockeries etc.



It is necessary to know when the building should be inspected, what should be inspected, at what level of deterioration a component should be replaced or repaired and whether any preventive maintenance is called for.

As per Punyashlok Ahilyadevi Holkar Solapur University, Solapur Citizens' charter and guidelines issued by Government, programmer for maintenance work for the ensuing year is to be finalized by 30th April of the year. To achieve this it is necessary that all buildings should be inspected by the JE in March and April. In general, the Overseer should inspect each and every building under his charge once every six months, the Junior Engineer once a year and the University Engineer should inspect all buildings where serious defects have been brought to his notice. In case there are doubts about structural soundness of a building, the same should be brought to the notice of Building Works Committee on a priority basis so as to take prompt remedial action. In fact, safety of the building is given a primary place and for this purpose, structural soundness is the most important requirement of the building.

There is necessity to ensure and maintain uniformity for objective inspection of the buildings as it is difficult for every member of staff to know what should be inspected.

These reports help in the following

- Preparation of a need based estimates for annual, special and extraordinary repairs of buildings.
- Preparation of programmers for undertaking major repairs according to an established programmer bringing minimum inconvenience to the residents/occupants.
- A regular inspection prevent/for stalls an unexpected break-down of a building this becomes necessary as we have to maintain building even beyond their normal life period

Inspection should also cover outside areas such as the drive ways, paths, lawns, gardens, hedges, trees, boundary walls, functioning of treatment plants provided if any in the form of septic tanks etc.

It is necessary to inspect all storm water drainage works before and during monsoon periods.



accordingly. In addition, for residential buildings, grill work is provided for safety of residents. The windows have generally a full sized glass sheet as a result it has become difficult to replace and even clean these glass panes. The problem is acute in buildings beyond three stories. It is necessary to provide proper accessibility to these windows through a regular arrangement in such a manner as to ensure fixing of glass and their cleaning from inside of the building, maintenance and upkeep of desert cooler & WTAC units installed at the windows.

Overhead tanks have been provided over the buildings. With a view to keep the roof inaccessible for the residents, no terrace staircase has been provided to reach the terrace. In the day to day maintenance, however the maintenance staff are called upon to go to the terrace to check the over flow and the like for which regular access IS necessary. Ladders should be provided as a means of access, preferably on a permanent basis.

Buildings of monumental nature are finished with special treatment on roof, false ceiling, wall paneling and carpeting on wall which may require to be attended. It is necessary to have permanent arrangements for reaching such heights as a part of maintenance tools. It can be a dismountable tubular scaffolding system provided with rollers as a standby for reaching the false ceiling.

- **Inspection of buildings and services**

- **Periodical inspections**

- **Buildings and services**

The starting point of maintenance to building is the regular inspection of buildings. It should be carried out periodically with a view to keep down the restoration cost to the minimum and to attend to essential repairs at the opportune moment. The symptoms of malfunctioning varies from building to building and the resulting deterioration varies with reference to the climatic conditions, pollution, fungi, the insect attack, subsidence, flooding, intensity of usage, careless usage and the like.



cause floods, roof leakage into buildings, blow water through broken window panels, blow off thatched

Roofs, hutments and bus shelters, cause disruptions in power supply, water supply and sewerage systems resulting in untold sufferings to people besides causing huge financial , losses to the ex chequer and endangering lives. To minimize such losses and avoid danger to life it is necessary to undertake some specific pre-monsoon preventive measures which are briefly discussed below:

- **Attending to services before Monsoon Rains /Cyclones.**

Buildings and Services are to be thoroughly checked for safety and functioning before monsoon. In coastal areas the same are checked before cyclones. Precautionary measures are to be taken for various items of the buildings/services, some of which are mentioned below:

- **Temporary Roofing**

Many buildings are provided with temporary roofing like AC Sheet roofing. Before the onset of the monsoon, the Engineer-in-charge of Maintenance should see that the L/J hooks, bitumen washers, Limpet washers are in position. Precautionary measures against blowing off the roof should be taken by lightly loading the roof temporarily or providing MS flats/rods fixed by bolts and nuts to purlins for rows of AC Sheets.

- **Door /Window glazing:**

All broken glazing should be replaced and sufficient number of glass window panes and iron monger fittings should be kept in stock for emergency repairs. The tower holts, hooks and eyes and other wind appliances should be made in working condition. Occupants should be advised to keep the doors and windows closed during cyclonic weather especially at nights.

- **Checking buildings against seepage**

Terraces of all the buildings may be inspected well ahead of the monsoon rains in June and December and necessary repairs carried out. The roofs should be cleaned and debris removed from the roof to avoid blockages in roof gutters and rain water pipes. Rainwater inlets should be checked and ensured that there are no damages around these. Vertical rain water pipes



Any item pertaining to Civil/Electrical in garden area such as broken man-holes, Drains, water pipe lines, Cable etc. which needs repair should be reported to concerned Dy. Registrar (Civil)

- **Electrical Installations**

The Punyashlok Ahilyadevi Holkar Solapur University, Solapur maintains the installations and services at the office and residences of VIP/VVIP including all arrangements made during functions held on their behalf at University campus. These inspections/instructions do not supersede the normal/periodical/routine checks which are required to be carried out on the equipment's and installations like insulation tests, Earth tests, Oil tests, Replacement of component schedule, oil replacement, other tests to be carried out as per manufacturer's recommendations, but are in addition to the same.

- **Inspections for taking over of buildings**

Buildings along with their services are designed and constructed to meet specific user requirement. So as to ensure full user satisfaction, it is necessary that the buildings and services on their completion should be subjected to intensive review by the team of construction and maintenance Engineers.

During the course of construction, certain tests and checks are carried out by the engineer-in-charge of the construction.

Also whenever any works are entrusted to contracting agencies, these are tested and taken over by the Engineer-in-charge. Certain guarantee certificates from the suppliers/manufacturers are also received by Engineer-in-charge before accepting materials and equipment's. Maintenance in charge should ensure that these are handed over to him at the time of handing over of facility.

- **Preventive maintenance**

As mentioned above, for carrying out preventive maintenance, inspection of building has to be carried out. The building is to be inspected during the months of March-April and September-October. Monsoon winds bring rainfall to Maharashtra

- i) South West Monsoon (June-October)

Experience has taught that monsoon rains, winds and cyclone cause considerable damage to buildings, tall structures, uproot trees and lamp posts.



engineers from all disciplines concerned with the maintenance and work should be planned to put the services in order immediately.

Overhead cables, uprooted light poles, restoration of power supply, disinfecting of water supply lines/installations, ensuring normal water supply, restoration of sewage pumping operations, flood relief works, repair to breaches to embankments of roads and bunds are some of the important areas which are to be attended immediately after monsoon/cyclone. Detailed inspection of the buildings should be carried out to ensure that broken false ceiling, broken glass panes, blown off A.C. sheet roof, claddings, doors and rolling shutters etc. are attended immediately.

Where breakdown would result in serious damage to the equipment and costly repairs. Preventive maintenance is necessary. Whereas Preventive maintenance is also justified where it improves performance and the cost is less, compared to cost of repair after a failure.

The works of preventive maintenance in case of buildings are to be carried out latest by 15th June and 31st October. In case of periodic inspection machinery equipment is carried out to avoid the conditions leading to breakdown or harmful depreciation. It is also carried out for proper up-keep of Plant through servicing and repairs while they are still minor. However in case of machinery and equipment's, frequency of inspections should be decided and the system should be designed for improved maintenance techniques, low cost maintenance and avoiding the over maintenance on the basis of statistical data available for maintenance and manufacturers recommendations.

Annexure- 1



should be properly clamped to the walls. Seepage through cracks developed over Chajja is very common. It should be ensured that required repairs are carried out to the junction of Chajja with the walls.

- **Checking of external areas**

Open areas and lawns should be inspected and measures taken to ensure that rain-water does not accumulate therein. Wherever storm water drains are under the maintenance of Punyashlok Ahilyadevi Holkar Solapur University, Solapur the same should be delisted and paved surfaces or bunds repaired. Precaution should be taken against erosion of land and embankments.

- **Checking of sewers and sewage installations**

All inspection chambers, manholes and sewer lines should be cleaned and flushed to establish free flow of sewage. Sewage sumps should be cleaned of accumulated grit, sand and sludge. Bunds of oxidation ponds should be strengthened wherever necessary.

- **Checking of electrical installations**

Because of rise in ground water table at places, it may be necessary to remove electric pumping sets installed in wells and sump, below ground water level and raise them temporarily to safe levels. Care should be taken to ensure availability of stand-by power supply arrangement to take care of breakdown in power supply in monsoon or at the time of cyclones. The Diesel Generating sets should be checked and kept in working condition and wiring should be checked for loose connections.

- **Checking of Air-conditioning installations**

Wherever Central AC plants or package units are provided, the dehumidification system consisting of strip heaters, humidistat etc. should be checked for their functioning.

- **Post monsoon/cyclone measures**

Inspire of pre-monsoon measures taken by various buildings/services, very often these are affected during the monsoon and cyclones. In coastal or cyclone prone areas, the services are affected more. Immediately after monsoon, all important structures/services should be inspected by a team of



COMPLAINT REGISTRATION FORM



पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर अभियांत्रिकी विभाग

स्थापत्य/तारतंत्री/सुतारकाम/नळकारागीर/संगणक/टेलिफोन कामासंबंधित तक्रार /मागणी पत्रक

संदर्भ क्रमांक व दिनांक	
संकुलाचे/प्रशासकीय विभागाचे नाव	
अधिकारी/कर्मचा-याचे नाव, पदनाम व संपर्क क्रमांक	
कामाचे स्वरूप (उदा. तारतंत्री काम, नळकारागीर काम अथवा सुतार)	
अनु. क्र.	रुम/कक्ष क्रमांक (काम करावयाची निश्चिता जागा)
	करावयाच्या कामाची सविस्तर माहिती

संचालक/विभागप्रमुखाची
सही

काम पुर्ण झाल्याचा अहवाल

(काम पुर्ण झाल्यानंतर संबंधित संचालक/विभाग प्रमुखानी काम पुर्ण करून दिलेल्या तांत्रिक कर्मचा-याला भरून दयावयाची माहिती)

अनु.क्र.	वरील कामाकरिता संबंधित तांत्रिक कर्मचारी विभागास भेट दिलेला दिनांक व वेळ (सदर कामाकरिता लागलेला वेळ तसेच तांत्रिक कर्मचारी किती वेळा विभागास भेट दिला याची माहिती स्पष्ट नमूद करावी)	काम पुर्ण झालेला वेळ व दिनांक	
०१.			
०२.			

संचालक/विभागप्रमुखाची सही

(अभियांत्रिकी विभागाने भरावयाची माहिती (कार्यालयीन कामाकरिता))

तक्रार प्राप्त झालेला दिनांक व जावक क्रमांक	
विद्यापीठ अभियंता/कनिष्ठ अभियंता यांचा शेरा व सही	
वरील काम संबंधित तांत्रिक कर्मचा-याला देणेकामी कनिष्ठ अभियंता यांचा शेरा व सही	
काम पुर्ण झाल्यास अहवाल किंवा काम अपुर्ण राहिल्यास काम करणा-या संबंधित तांत्रिक कर्मचा-याचा शेरा (कारण) व सही	
वरील काम पुर्ण झाल्यानंतर विद्यापीठ अभियंता /कनिष्ठ अभियंता यांचा शेरा व सही	





पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर
अतिथीगृह मागणी प्रपत्र

दि. / /२०

- अतिथीचे नाव व पत्ता :-----

- मोबाईल व ई-मेल आयडी :-----
- पद/हद्द (लागू असल्यास) :-----
- विद्यापीठतील कामाचे स्वरूप :-----
(बैठक/कार्यशाळा/विद्यापीठातील :-----
-कार्यक्रम/संघटना/खाजगी) :-----
- ५. आवश्यक असणा-या रुमची संख्या :-----
- ६. विद्यापीठातील कोणत्या ठिकाणी रुम :-----
हवी आहे. (विद्यापीठ परिसर अतिथीगृह/ :-----
विद्यापीठ रंगभवन ग्रंथालय संलग्न सुविधा केंद्र):-----
- ७. रुमचा प्रकार (VIP/A.C.) :-----
- ८. संकुल संचालक/विभाग प्रमुख/व्यक्तीची :-----
शिफारस व सही :-----
- ९. अतिथीगृहा आगमनाची तारीख व वेळ :-----
- १०. अतिथीगृह सोडण्याची तारीख व वेळ :-----
- ११. ओळखपत्र जोडले आहे का? (होय/नाही) :-----

अतिथीचे नाव व सही

अभियांत्रिकी विभागासाठी प्रशासकीय मान्यता

अ) -----यांनी मागणी केल्याप्रमाणे अतिथीगृहाकडील
VIP/A.C. रुम मंजूर करण्यात यावी.

ब) अतिथीगृहाकडील सद्यस्थिती पाहता कोणतीही रुम उपलब्ध नसल्यामुळे त्यांची मागणी अमान्य
करण्यात येत आहे.

क. लिपीक

कक्ष अधिकारी

मा. विद्यापीठ अभियंता

आतिथीगृहाच्या कार्यालयीन कामासाठी

श्री/श्रीमती-----हे दि. -----ते दि----- पर्यंत
एकूण-----दिवस रुम नं-----येथे वास्तव्यास होते त्यांनी अतिथीगृहाचे भाडे रक्कम रु. -----/-
(पावती क्र. -----दि. -----) नुसार आदा केले आहे.

कार्यालयीन कर्मचा-यांचे सही व नाव

(टिप : जर अभ्यागताकडून भाडे आकारण्यात येणार नसेल तर संकुल/विभाग/व्यक्ती यांनी शिफारस केलेल्या अतिथीचे रुम
भाडे भरण्याची जबाबदारी हि त्या प्रमुख/व्यक्तीवर असेल.)





पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

अभियांत्रिकी - वाहनविभाग
वाहन दुरुस्ती प्रपत्र

दि.

प्रति,
मा.विद्यापीठ अभियंता,
पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

विषय : कार्यालयीन वाहन दुरुस्ती करणे बाबत.

महोदय,

विद्यापीठ वाहन क्रं ची खालील घमाणे दुरुस्ती/ सर्व्हिसिंग कामे/इतर
वस्तु खरेदी करून घेणे आवश्यक आहे.

अ.क्र.	दुरुस्ती कामाचा/वस्तु खरेदीचा तपशील
१.	
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४.	
५.	

वरील दुरुस्ती कामे/खरेदी अधिकृत सर्व्हिससेंटर मे.....
वांचे कडून करून घेण्यास अंदाजे खर्च रु..... इतका अपेक्षित असून प्रत्यक्षात वाहनदाखवून
अंदाजे खर्चाचे अंदाजपत्रक घेण्यास परवानगी मिळावी. .

आत्ताचे चालू कि.मी	1679
मागील दुरुस्तीचे/सर्व्हिसिंग कि.मी	

श्री.

वाहनचालक



