



MAASAI MARA UNIVERSITY

QUALITY MANAGEMENT SYSTEM BASED ON ISO 9001:2008

DEVELOPMENT AND ESTATES PROCEDURE MANUAL

MMU/D&EPM/D&E/2013

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Authorized by: <u>Prof. David K. Serem</u> V.C.	Sign: 	Date: 4 th June 3, 2013
Issued by: <u>Prof. Gerald N. Kimani</u> MR	Sign: 	Date: 4 th June 3, 2013

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PROCEDURE NUMBER 1: REPAIRS AND MAINTENANCE

1.0 GENERAL

1.1 PURPOSE

The purpose of this procedure is to ensure effectiveness, efficiency, consistency and timeliness in repairs and maintenance.

1.2 SCOPE

This procedure applies to repairs and maintenance of mechanical building services, buildings, roads, electrical, plumbing and ground works in the University.

1.3 REFERENCES

a) Quality Manual – MMU/QM/MR/2013.

1.4 TERMS AND DEFINITIONS

a) MO – Maintenance Officer

b) DVC A&F - Deputy Vice Chancellor, Administration and Finance

1.5 PRINCIPAL RESPONSIBILITY

The Maintenance Officer shall ensure that this procedure is adhered to.

2.0 METHOD

2.1 Repairs

2.1.1 This shall start with a user establishing the need for repairs through observation or receiving information of breakdown or malfunctions.

2.1.2 Upon 2.1.1, the user shall fill in a job request form available at the Estates Department.

2.1.3 Upon filling the form, the user shall submit it to the MO for action.

2.1.4 Upon receipt, the MO shall assign a member of staff through updating the job request form, to make an assessment of the breakdown or malfunction.

2.1.5 The assigned officer shall within a day make the assessment, prepare an inspection report and forward it to the MO.

2.1.6 Upon receipt, the MO shall within the same day review the report and determine whether the required skills and materials are available.

2.1.7 In the event that the skills or materials are not available, the MO shall forward the inspection report with recommendations to Head of Development and Estates who shall in turn review it and proceed as per control of outsourced services procedure number 8 in the Administration Procedure Manual.

- 2.1.8 Upon confirmation of availability of the required skills and materials, the MO shall fill in a Job Card and requisition the materials required for the works through filling in a SRN form.
- 2.1.9 The MO shall notify the assigned personnel vide the job card and ensure they are issued with the required materials.
- 2.1.10 The assigned Personnel shall undertake the repairs as per the job card.
- 2.1.11 Upon completion of the repairs, the Personnel shall ensure the user countersigns the job card to confirm completion of work.
- 2.1.12 The MO shall supervise the work done and update the Job Card.
- 2.2 Scheduled Maintenance**
- 2.2.1 This shall start with the MO preparing an annual maintenance schedule during the month of June every year.
- 2.2.2 In preparing the schedule, the MO shall consider:-
- a) Equipment/Machine Manuals
 - b) Physical status of buildings
 - c) Personnel required
 - d) Review of inspection reports
- 2.2.3 Upon preparation, the MO shall forward the annual maintenance schedule and budget to the Head, Development and Estates for review.
- 2.2.4 In reviewing, the Head, Development and Estates shall consider the criteria in 2.2.2.
- 2.2.5 In the event of any anomalies, the Head, Development and Estates shall make recommendations to the MO for amendment and resubmission.
- 2.2.6 Upon review, the Head, Development and Estates shall forward it to the DVC (A&F) for approval.
- 2.2.7 In approving the DVC (A&F) shall consider the following:-
- a) Criteria in 2.2.2
 - b) Budgetary Provisions for the current year
- 2.2.8 Upon approval, the Head, Development and Estates shall communicate the same to the MO for implementation.
- 2.2.9 The MO shall ensure issuance of the respective job cards and that work is done and the job cards updated.

2.2.10 In case of any outsourcing, the MO/Project Implementation Team shall ensure issuance of completion certificates to the contractors.

3.0 LIST OF APPLICABLE RECORDS

- 3.1 Job cards.
- 3.2 SRN forms.
- 3.3 Annual maintenance schedule.
- 3.4 Completion certificates.

PROCEDURE NUMBER 2: DESIGN AND SUPERVISION OF BUILDING PROJECTS

1.0 GENERAL

1.1 PURPOSE

The purpose of this procedure is to enhance efficiency and accuracy, in the preparation of contract documents, contract administration and dispute resolution.

1.2 SCOPE

This procedure applies to preparation of all contract documents and supervision of building projects in Development / Estates department of Masai Mara University.

1.3 REFERENCES

- a) Quality Manual – MMU/QM/MR/2013.
- b) The Architects and Quantity Surveyors Act Cap 525
- c) Local Government Act (CAP 265)
- d) EMCA (1999)
- e) Building code (1969)
- f) Arbitration Act
- g) Engineers registration Act

1.4 TERMS DEFINITIONS

- a) PIT – Project Implementation Team
- b) Project Brief – a detailed requirement for a project from a client.
- c) MMU – Masai Mara University
- d) C.A – Masai Mara University Architect
- e) QS – Quantity Surveyor
- f) BQ – Bills of Quantities

1.5 PRINCIPAL RESPONSIBILITY

The Masai Mara University Architect shall ensure implementation and maintenance of this procedure

2.0 METHOD

2.1 Production of drawings

- 2.1.1 This shall start with the Head (development/Estates department) receiving a request from a department or University management in need of a building to house specific activities.

- 2.1.2 The Head (development/Estates department) in liaison with the UA. shall verify the request based on the brief and the UA shall prepare outline sketches while the QS prepares the preliminary cost estimates for approval by the University Management.
- 2.1.3 After approval by the University management the Head (development/Estates department) shall determine whether the Development and Estates department has in-house capacity to undertake the project or not.
- 2.1.4 In the event that the department does not have the capacity to handle the work, the Head (development/Estates department) shall communicate this information to the University Management clearly stating the consultants required and the terms of reference for their engagement.
- 2.1.5 Upon commissioning of all the externally and internally available consultants for the project, the Head (development/Estates department) shall thereafter constitute a Project Implementation Team to embark on the project.
- 2.1.6 The project architect in liaison with the Head (development/Estates department) shall convene a PIT meeting within 1 week of commissioning with the management and user department for purposes of developing a detailed project brief.
- 2.1.7 The PIT shall visit the proposed site within 1 week after the meeting with the University Management for the purpose of developing the project brief further by conducting the proposed site analysis in order to appreciate the different relevant parameters of the site. These parameters shall include;
- a) Site topography
 - b) Availability of services e.g. water, electricity, sewerage
 - c) Accessibility to the site
 - d) Site orientation
 - e) Visual appreciation of the type of soil
 - f) Vegetation
 - g) Visual appreciation of size of the plot
- 2.1.8 After the site visit, the PIT shall convene a meeting where a tentative work programme, shall be developed. The work program shall allocate the time required by each PIT member to complete project documentation.
- 2.1.9 The time for completion of project documentation process shall be allocated based on the following criteria:

- a) The complexity of the project
 - b) The physical location of offices of the PIT members
 - c) Time required by each PIT member for preparation of the appropriate drawings, specifications and BQS.
 - d) Mode of communication between the PIT members.
- 2.1.10 Where a surveyor is a member of the PIT, he shall undertake a topographical site survey to inform the building design and submit it to the project architect to check for completeness of information and accuracy
- 2.1.11 On verification, the Project Architect shall forward the topographical maps to the Head (development/Estates department) for approval based on the suitability of the site for the proposed project.
- 2.1.12 In the event that the approval is not granted, the Head (development/Estates department) shall advice appropriately
- 2.1.13 Upon approval, the Head (development/Estates department) shall forward the survey maps to the PIT for commencement of architectural designs.
- 2.1.14 The project architect shall develop preliminary design drawings in accordance with the project brief. The preliminary design drawings shall consist of:
- a) Layout floor plans
 - b) Sections and elevations
 - c) Overall and space dimensions.
 - d) Three Dimension drawings.
- 2.1.15 The project architect shall table or send the preliminary drawings to PIT members for discussion and further input. The project architect shall act on any recommendations.
- 2.1.16 The project architect in liaison with the, the Head (development/Estates department) shall convene a meeting with the University Management / user department where the preliminary design drawings shall be tabled for discussion and approval. The Head (development/Estates department) shall ensure that all concerns raised by the user department/ University management are addressed.
- 2.1.17 Upon approval, the project architect shall circulate the preliminary design drawings to all the other PIT members to initiate the appropriate preliminary designs, specifications and bills of quantities while the project architect proceeds to prepare scheme design drawings. The scheme design drawing shall include:

- a) Floor layout
 - b) Elevations
 - c) Sections
 - d) Indication of finishes
 - e) Detailed dimensioning
- 2.1.18 The project architect in liaison with the Head (Development/Estates) shall forward the scheme design drawing to the user department/University management for approval based on:
- a) The accuracy of information,
 - b) Clarity of presentation
- 2.1.19 The project architect shall circulate the approved scheme design drawings to PIT members for firming up their respective scheme designs, specifications and bills of quantities.
- 2.1.20 The Project Architect shall then proceed to prepare production and working design drawings that consist of:
- a) Assembly drawings
 - b) Component drawings
 - c) Fabrication drawings
 - d) Appropriate schedules (door, window, colour, finishes, ironmongery)
 - e) Detailed specifications
- 2.1.21 The project architect in liaison with Head (Development/Estates) shall forward these drawings to the University Management for approval based on:
- a) Accuracy
 - b) Completeness
 - c) Conformity to scheme designs
 - d) Appropriateness of technology.
- 2.1.22 The project architect shall act on all issues raised by the University Management.
- 2.1.23 The Head (Development/Estates) shall ensure maintenance of copies of the approved production / working drawings in the contract files cabinet and circulate copies to the PIT members for finalization of their design drawings, specifications and bills of quantities.

2.2 Cost control during design stage

- 2.2.1 The CQS shall establish details of the construction requirement from sketches provided by the project Architect and prepare a sketch estimate for the same. The brief shall detail the construction parameters and the construction budget of the user department/University Management.
- 2.2.2 Upon approval of the sketch drawings and estimate by the University Management the QS shall wait for the architect to produce preliminary drawings.
- 2.2.3 After the architect and other PIT members prepare their preliminary drawings and estimates, they shall forward them to the QS for further costing and incorporation to the preliminary drawings presented to the management under clause 2.14.
- 2.2.4 Upon finalisation of scheme drawings in clause 2.15, the PIT members shall forward the drawings and BQS for further costing and incorporation to the scheme drawings presented for approval under clause 2.16.
- 2.2.5 After the architect and other PIT members prepare their production drawings they shall forward them to the QS for further costing and incorporation to the estimated draft BQ for presentation for approval to the University management together with production drawings under clause 2.19.
- 2.2.6 The Head (Development/Estates) shall ensure maintenance of copies of the approved estimated Bills of Quantities in the contract files cabinet and this procedure shall be deemed complete.

2.3 Signing the contract

- 2.3.1 This procedure shall start with the CQS drafting a letter of notification of award of contract for the MMU signature to the winning contractor within a week of receipt of CTC minutes awarding contract
- 2.3.2 The letter shall stipulate the following details:
- a) 14 days appeal period
 - b) Contractor to prepare performance bond and works programme
 - c) Contract period from date of commencement
 - d) Specifies the project manager
 - e) Contractor advised to communicate with project manager on all matters concerning the project.
- 2.3.3 The draft letter shall be forwarded to MMU management for signature and dispatch.

- 2.3.4 The CQS shall ensure retention of a copy and dispatch of the original to the contractor and copied to the project manager and PIT.
- 2.3.5 In the event of an appeal of award, the CQS shall assist in the interpretation of the contractual matters and advice accordingly until the appeal is resolved.
- 2.3.6 If no appeal the CQS shall prepare the contract documents by assembling the documents as listed in the BQS.
- 2.3.7 The CQS shall ensure the signing of contract between University management and the contractor before the commencement date of the works.

2.4 Supervision of projects

- 2.4.1 Supervision shall start with receipt of a signed project contract agreement by the Head (Development/Estates) from MMU Management appointing the Head (Development and Estates) as the project manager.
- 2.4.2 Within two weeks of receipt of the contract agreement, the Head (Development/Estates) shall convene a site handing over meeting with the University Management, PIT and contractor to:
- a) Introduce the parties involved in the construction of the project
 - b) Interpret the contract
 - c) Define the roles for various parties involved.
 - d) Agree on the commencement date.
 - e) Issuance of all project architectural and engineering drawings, specifications and bill of quantities.
 - f) Agree on schedule of site meetings
 - g) Defining the site boundaries
 - h) Agreeing on site access and organisation
 - i) Introduction of contractors personnel and Clerk of Works
 - j) Identification/agreeing on services in the site
- 2.4.3 The project manager shall convene site meetings as per the site meeting schedule to deliberate the agenda as set out during the contract period.
- 2.4.4 The PM shall ensure enforcement of all clauses of contract agreement.
- 2.4.5 On completion of the project, the Project manager shall arrange for a practical completion inspection of the project by the PIT, MMU management and contractor. The PM shall thereafter issue a practical completion certificate.

2.4.6 The PM shall arrange for a project hand over meeting with the contractor, MMU Management and PIT during which the client department/MMU Management takes over the building and the PM issuance of a project Handing over Certificate to the MMU Management and the contractor.

2.4.7 The contractor shall attend to all defects identified during the defects liability period and the PIT shall arrange for an inspection of making good defects meeting and a certificate of making good defects issued.

2.4.8 The procedure will end after issuance of certificate of making good defects

2.5 Cost Control during construction (Project financial Appraisals)

2.5.1 In the event of Project QS encounters the following scenarios he/she shall prepare project financial appraisal:

- a) Provisional works executed
- b) Variations in design
- c) Expenditure of Prime Cost Sums e.g. electrical works

2.5.2 The project QS shall undertake a comparative analysis of the contract sum against the actual expenditure.

2.5.3 The project QS shall, based on the scenarios, prepare a financial appraisal report to advice on final financial implication of the proposed variations to the project and forwarded to the PM.

2.5.4 Project cost control is an on-going activity which covers various activities.

2.5.5 Upon commencement of the project, the project QS shall ensure financial appraisal is undertaken at intervals of not more than 3 months to establish variances between the cost projections and actual cost of implementing the project and submit it to the Project manager for review.

2.5.6 The Project manager shall review the financial appraisal report and advice the project QS on the way forward.

2.5.7 In course of implementing the project any site instruction shall be in writing and issued using the site instruction form or site instruction book. Upon receipt of a site instruction the project QS shall assess the instruction and the financial implication of the instruction, make a brief on the same with recommendations on the way forward and forward it to the PM.

- 2.5.8 During the project implementation phase, the project QS shall ensure re-measurement and revaluation of the provisional and extra works and value the same to establish its impact on the budget and give recommendations to the PM to either:
- a) Scale down the project
 - b) Request for additional funds
- 2.5.9 The project QS shall also ensure the reappraisal of all works covered, prime cost and provision sums to establish the changes, prepare a brief for the same and forward it to the PM with recommendations on how to deal with the same.
- 2.5.10 In the event the changes are not substantial, the project QS shall ensure that they are dealt with as per provisions in the contract agreement and the BQs
- 2.5.11 If the changes are substantial, the project QS shall advise the PM on how to deal with the changes by either:
- a) Scaling down the project
 - b) Requesting for additional funds
- 2.5.12 The project QS shall ensure that the activities on cost control are continuously undertaken in the implementation of the project.
- 2.5.13 This cost control process shall be deemed complete upon the successful completion of a project.
- 2.6 Preparation of variation orders**
- 2.6.1 The project QS receives site instruction from the project manager.
- 2.6.2 The project QS works out the site instruction in detail and prepares a variation order and submits to the PM for approval. Where the variation is within the contract sum, the PM gives his approval. Where the variation would cause the contract sum to increase, the PM forwards it to Head (Development and Estates Department) for review and recommendations for approval by the MMU CTC.
- 2.6.3 If not approved project QS acts on recommendations.
- 2.6.4 On approval the variation order is issued to the contractor to perform the variation
- 2.7 Fluctuations**
- 2.7.1 For contract with a fluctuation clause, the project QS shall undertake monthly analysis of changes in prices of material and labour and determine the change in the tender price based on indices published by the JBC and issued by the Architectural Association of Kenya.

2.7.2 The project QS shall incorporate the fluctuation in the financial appraisal and factor it in the subsequent interim payment

2.8 Extension of time

In the event there is need to extend the contract time the project QS shall ensure the following:

- a) Extension of performance bond
- b) Renewal of insurance policies

2.9 Handling contractor claims

Upon receipt of the claim notice from a contractor by the CQS shall analysis and evaluate within 30 days based on validity and communicate to the PM. Upon PM approval, the CQS shall include the claim in the subsequent interim payment

2.10 Valuation for payments

2.10.1 The project QS shall make periodical site visits to survey the work in progress

2.10.2 After the survey the project QS shall prepare a valuation for interim payment in line with the contract documents and forward to the project manager for approval.

2.10.3 In approving the valuation the PM shall consider the work done and contract documents.

2.10.4 If not approved the project QS shall act on the recommendations by the PM and re-submit the revised valuations

2.10.5 On approval the project QS prepares payment certificate that includes payment voucher together with other back-up documents and forward to PM for verification based on approved valuation.

2.10.6 The PM shall on verification forward the certificate to the Head (Development and Estates Department) for further verification and authentication and eventually to the MMU management for approval and payment.

2.11 Contract dispute resolution

2.11.1 In the event of any disputes between the parties to the contract, the CQS shall ensure interpretation of the clauses of dispute within the contract and advice on the most suitable way to resolve the dispute as per contract terms and conditions.

2.11.2 The CQS shall ensure representation of all parties during the dispute resolution sessions. (Negotiation, mediation, reconciliation and arbitration)

2.11.3 Where the matter has gone to arbitration, the CQS shall ensure that the proceedings are conducted in accordance with the current Arbitration Act.

2.12 Preparation of final project accounts

2.12.1 Within 3 month of project completion, the project QS shall undertake final re-measurement of works in liaison with the contractor and prepare a final project account.

2.12.2 The final project account shall include;

- a) Final payment certificate in accordance with contract
- b) Summary of all variation orders
- c) Amount paid to the contractor
- d) Amount due to the contractor

2.12.3 The PM shall ensure the contractor and MMU concur with the final project accounts and this procedure shall be deemed finalized.

3.0 LIST OF APPLICABLE RECORDS

- 3.1 Job requisition form
- 3.2 Job Card
- 3.3 GRN
- 3.4 Annual Maintenance Schedule
- 3.5 Completion Certificates
- 3.6 Certificate of practical completion
- 3.7 Certificate of making good defects
- 3.8 Site meetings minutes
- 3.9 Handing over/taking over certificate
- 3.10 Payment voucher
- 3.11 Standard valuation support documents
- 3.12 Variation order form
- 3.13 Site instruction book