

**Dutch Brothers Plus** Tel: 530-315-4839

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Oct 05, 2018 |  |  | 900 |

Jeffery Morse, PM

Dutch Brothers Plus

*Dutch Brothers Plus Building Plan*

Project Quality Management Plan (PQMP)

The project quality management plan is a component of the project management plan that describes how the organization's quality policies will be implemented.

It describes how the project management team plans to meet the quality requirements set for the project.

### REVISIONS AND DISTRIBUTION

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Revision** | **Release date** | **Distributed to\*** | | | | | | | | | | | |
| Client | Consultant | Main office(s) | Project Manager | Procurement Manager | Quality Manager | Costs Manager | Building and Planning | Contractor | Sub-contractors | Suppliers |  |
| Rev. 0 (draft) | 29/10/2013 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\*) Detailed distribution lists shall be prepared for each distribution event. Further details as per the project communication plan

#### Amendments

The Project Quality Management Plan (PQMP) may require updates. Any amendment to this plan shall be informed to the change control board by use of the change request form and approved by the project change control board prior to distribution. Only revised parts of the plan will be distributed along with the approval and shall be accompanied by instructions how to implement the changes.

The initial page numbering system will be a normal continuous numbering displayed in the lower right corner of each page. If pages must be added, characters shall be added to the number. In case entire pages are deleted, the corresponding page shall be replaced by a blank page stating, “page removed”.

Each added/changed page shall have the revision number and date of approval displayed on the bottom of the page.

### PROJECT SPONSOR APPROVAL

|  |  |  |
| --- | --- | --- |
| **Prepared by:** | **Reviewed by:** | **Approved by Proj. Sponsor:** |
| HQ, 05/10/2018 | Place, dd/mm/yyyy | Place, dd/mm/yyyy |
|  |  |  |
| Jeffery Morse, PM  Designation | Name  Designation | Name  Designation |

**TABLE OF CONTENTS**

Revisions and Distribution................................................................................................................. II

Amendments ................................................................................................................................. II

Project Sponsor Approval ................................................................................................................. III

Quality Management Approach ........................................................................................................ 1

Objective ....................................................................................................................................... 1

Basic Processes of Quality Management ....................................................................................... 1

Tools and Techniques to be applied .............................................................................................. 1

General Approach .......................................................................................................................... 1

Laws, Regulations and Guidelines ................................................................................................. 2

Other Project Plans ........................................................................................................................ 2

Project Scope of Works (Brief Description) ....................................................................................... 3

Organization and Staffing .................................................................................................................. 4

Organization Chart ........................................................................................................................ 4

Quality Metrics .................................................................................................................................. 5

Quality Assurance ..............................................................................................................................8

General Inspection Sequence............................................................................................................ 9

Quality Control .................................................................................................................................11

Preparatory QC Meeting ............................................................................................................. 11

Initial QC Inspection .................................................................................................................... 11

Follow-Up QC Inspection ............................................................................................................. 11

Final Inspection ........................................................................................................................... 12

Client Absence during Inspections .............................................................................................. 12

Record Keeping ........................................................................................................................... 12

Document Submission ................................................................................................................. 12

Inspection Procedures ..................................................................................................................... 13

Material Receiving Inspection ..................................................................................................... 13

Material Storage Inspection ........................................................................................................ 13

Off-Site Inspection ....................................................................................................................... 13

Workmanship Inspection ............................................................................................................ 13 Equipment and Plant Inspections ............................................................................................... 14

Management and Services Review ............................................................................................. 14

Submittal Procedure ....................................................................................................................... 14

Submittal Types ........................................................................................................................... 14

“Approval” Submittals ................................................................................................................. 14

“Review” Submittals .................................................................................................................... 14

“Information” Submittals ............................................................................................................ 14

Typical Material and/or Vendor Submittal Document ................................................................ 14

Submittal Registration ................................................................................................................. 15

Submittal Review ......................................................................................................................... 15

Submittal Approval ...................................................................................................................... 15

Approval Stamp ........................................................................................................................... 17

Request for Information .............................................................................................................. 18

Deficiency Procedure ...................................................................................................................... 20

Preventive Measures ................................................................................................................... 20

Continuous Improvement ........................................................................................................... 20

Non-Conformance Report (NCR) ................................................................................................. 20

Site Observation Report (SOR) .................................................................................................... 21

Corrective Action System ............................................................................................................ 21

Project Records and Project Documentation .................................................................................. 22

Filing System ................................................................................................................................ 22

Filing Scheme ............................................................................................................................... 22

Data Backup................................................................................................................................. 23

Testing ............................................................................................................................................. 24

General Testing Procedure .......................................................................................................... 23

3rd Party Testing ......................................................................................................................... 23

Test Results ................................................................................................................................. 23

Test and other Equipment Calibration and Maintenance .......................................................... 23

QA & QC Meetings .......................................................................................................................... 23

Mutual Understanding Meeting .................................................................................................. 23

Preparatory QC Meeting ............................................................................................................. 23 Weekly Meeting .......................................................................................................................... 23

Approval of Deliverables ................................................................................................................. 23

Definitions ....................................................................................................................................... 24

Acronyms and Abbreviations .......................................................................................................... 25

Appendices ...................................................................................................................................... 26

Attachments: ............................................................................................................................... 26

Checklists: .................................................................................................................................... 26

Forms: .......................................................................................................................................... 26

Registers: ..................................................................................................................................... 26

Records: ....................................................................................................................................... 26

# QUALITY MANAGEMENT APPROACH

Quality management under this document is defined as a system of planned activities that ensures that the deliverables of the DBP-Store sub-project that meet or exceed the client requirements, specifications and potentials. The system includes inspections, verifications, and evaluations of materials and workmanship required to essay the quality of the deliverables.

This quality management plan in conjunction with the other project plans identifies the necessary personnel involved in the quality team and their responsibilities.

## Objective

The objective of this project quality management plan is to ensure that the DBP-Store sub-project is delivered in accordance with the contractual specifications, to satisfy stakeholder requirements, to reduce cost of quality (namely cost of re-works, code violation, unnecessary maintenance and repair costs) and to complete the project within the contractual baselines.

## Basic Processes of Quality Management

* Plan quality management,
* Control quality,
* Perform quality assurance.

## Tools and Techniques to be applied

* Field monitoring,
* Inspecting,
* Testing,
* Reporting,
* Reviewing technical data,
* Detect defects while documenting necessary repairs,

## General Approach

Quality management shall focus on both **product quality** and **project quality**

**Product** quality is the quality of deliverables and focuses on product specifications, code requirements and aesthetic requirements.

**Project** quality more is concerned with product is delivery. It focuses more on the production processes, planning etc.

The quality system in general shall follow the **Plan – Do – Check – Act** approach.

## Laws, Regulations and Guidelines

Strict adherence to this plan in no way absolves any party from any obligations or responsibilities under applicable laws and regulations.

The laws and regulations applicable to this project and relevant to quality management are defined in the contract and include:

* Contracting law,
* California Construction Standard,
* Regulations by County and City Building and Planning, OSHA, and DBP Quality Management.

## Other Project Plans

This project quality management plan forms part of the overall project management plan. Further project plans to be read in conjunction to this project quality management plan are:

a) Project Management Plan,

1. Project Scope Management Plan,
2. Work Structure Breakdown Management Plan,
3. Change Management Plan,
4. Project Cost Management Plan,
5. *(This Project Quality Management Plan)*,
6. Project Human Resource Management Plan,
7. Schedule Management Plan,
8. Project Communications Management Plan*,*
9. Project Risk Management Plan,
10. Project Procurement Management Plan,
11. Project Stakeholder Management Plan,

# PROJECT SCOPE OF WORKS (BRIEF DESCRIPTION)

The overall project scope of works is defined in the scope of works documentation (SOW) and consists of:

* One set of approved plans and schematics, and all permits required.
* One remodeled store front with kiosk, parking, and signage.

The project and its site facilities are located at:

To be determined

# ORGANIZATION AND STAFFING

## Organization Chart

The organization chart is a supplemental chart to the overall project organization chart as depicted in the project human resource management plan.

The quality department shall be organized in sub-divisions and their main roles shall be distributed as abstracted below:

|  |  |  |
| --- | --- | --- |
| **Quality Assurance & Quality Control Management** | | |
| QA & QC Manager   * Plans the project quality management * Directs and manages the activities of the department * Coordinates activities with other disciplines * Reviews the outputs of the departments * Proposes and implements process improvements where advisable | | |
| **Quality Control: Everyone, PQM** | **Quality Assurance Everyone, PQM** | **Document Control: Control Board** |
| QC staff   * Inspects Phase for Code adherence * Verifies compliance with methodologies and appropriate working conditions | QA staff   * Reviews material submittals and method statements * Verifies compliance with quality   criteria   * Evaluates inspection records * Identifies training needs including supplier and sub-contr. personnel * Evaluates project records * Audits project procedures | DC staff   * Updates project records and   registers   * Compiles the quality file * Receives and registers relevant documents from other departments etc. * Distributes documents to other departments |

For more detailed descriptions of the roles and responsibilities refer to the corresponding section in the human resource management plan.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *DBP*    *Project Quality Management Plan (PQMP)*    **QUALITY METRICS**  The applicable quality metrics are defined in the contract, relevant laws and regulations and through requirements management.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **ID** | **Item** | **Standard Value** | **UOM** | **Measurement method** | **Acceptable Tolerance** | | | upper | lower | | 0001 | Plans | Approved by city planning and building |  | approval |  |  | | 0002 | Const. | Building Inspector, DBP Inspector, Codes |  | approval |  |  | | 0003 | Deliver | DBP, Project Management Team |  | approval |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |   Jeffery Morse, PM 900 P a g e | 5 |

# QUALITY ASSURANCE

Quality assurance (QA) are the actions that ensure quality both in the processes which develop products as well as the products themselves. The focus of QA is the lower of production costs through limiting mistakes.

By tracking compliance cost efficiency is maintained.

The key aim of QA is to avoid repetition of earlier issues while innovation of processes.

The targets are:

1. Increase awareness of processes that could improve organizational proficiencies.
2. Identify what needs improvement.
3. Facilitate communications to allow stakeholders in sharing experiences and innovations from inside and outside their functional boundaries.
4. Continuous improvement objectives.

It is the aim of this plan to determine process errors, whether potential or existing, and take corrective action. For further details please read the “Process Improvement Plan”.

*DBP*

*Project Quality Management Plan (PQMP)*

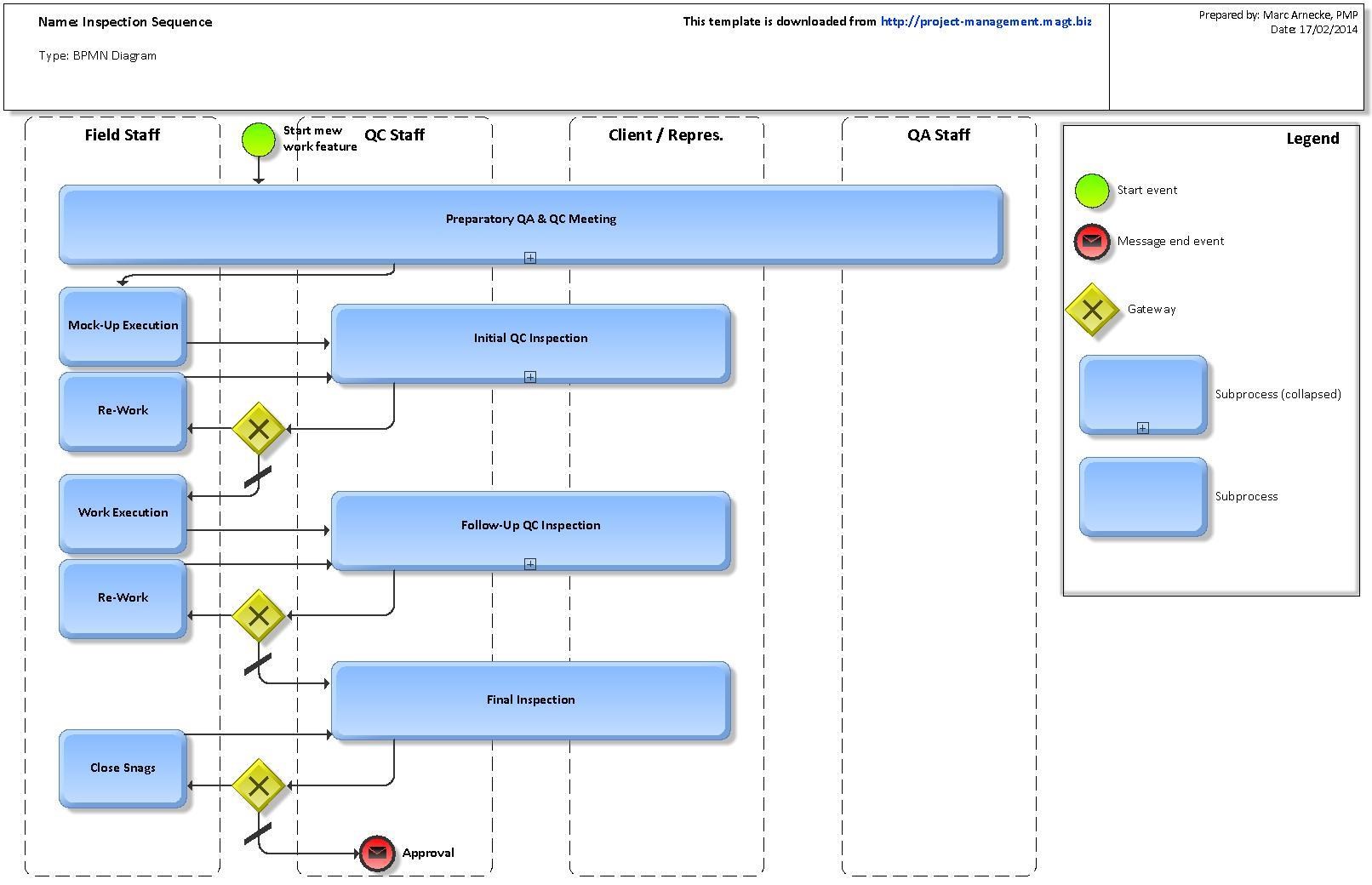
Jeffery Morse, PM

900

P a g e

|

**8**



**G**

**ENERAL**

**I**

**NSPECTION**

**S**

**EQUENCE**

Workmanship

workmanship

Inspections. QC Staff is Building & Planning

Inspections.

# QUALITY CONTROL

Quality control (QC) are the actions that ensure quality of products themselves. The focus of QC is to adhere to the Quality assigned by the Building Codes for the city of Marysville, in Yuba County, in the state of California. QC inspectors are not employees of DBP but are city, county, and state employees. However, the PQM for DBP is also considered a QC.

.

QC Inspections shall be conducted as a three-phase control process such as

|  |  |
| --- | --- |
| Prior | **Plans Approved by Building** |
| stage | **1. Initial inspection** |
| Production stage | **2. Follow-up inspections** |
| **3. Final inspections** |

Inspections shall be carried out for each item whether produced by the DBP a contractor or a sub-contractor. Each single control phase is vital for achieving the mandatory grade of quality. Preparatory meetings and initial inspections are of great importance for making provision against re-works, failures, costs, and delays.

## Initial QC Inspection

Initial QC Inspection(s) shall be carried out by the QC staffs before any work item has been produced. The QC staff will validate compliance with specifications, procedures and workmanship.

If the case that building and planning inspectors are not available, and where their approval is not needed for advancement the DBP PQM will perform the duties of the QC inspector.

Any differences of opinion in the interpretation of requirements, are settled with priority to county, city, and state personnel where such items interfere with approval. For those items that do not brake Building Code standards DBP QC will have priority.

Inspections are scheduled in advance. In the event that a product or intermediate product is not ready “Inspection Reschedule Request” (form 1) shall be passed to the Control Board through the PM or his representative and a copy of the schedule checklist shall be attached thereto.

## Follow-Up QC Inspection

Follow-up QC inspection are inspection to ensure compliance to a modification deemed necessary by the QC and will be performed as soon as possible after modifications are made. Follow - up inspections are also those inspections performed at the end of each phase.

Follow-up QC Inspection(s) are performed by the QC staff. These are done regularly during a production phase.

## Final Inspection

Upon completion of the whole of works a pre-final inspection shall be carried out by the DBP QC staffs and the client or his representative.

The purpose of this inspection shall be to confirm the quality of the final deliverables.

Outstanding and nonconforming items will be identified and recorded on a punch-list. As each item is closed out it will be documented. When all items recorded during the pre-final inspection have been corrected the final inspection will be scheduled.

## Client Absence during Inspections

If the client or his representative does not attend inspection(s), the inspection result(s) recorded by QC staffs shall be deemed binding and shall be passed on to the client or his representative “for information”.

## Record Keeping

All documents and forms shall be passed to the Control Board (CB).

The CB registers the documents and distributes them to the respective departments and people.

The DBP-QC staff furthermore shall maintain “Daily Activity Records”. Those records shall summarize all QC operations including activities, tests performed, inspections, and modifications carried out for every single day during the project life cycle. All records shall be passed to QA staffs for review.

## Document Submission

All documents that are intended for the client or his representative shall be delivered to their respective office address by hand or postal service in addition to any electronic mail sent. The client or his representative may deliver documents to the Project Team in a similar way.

All documents addressed to subcontractors or any other parties who have an office on site or nearby will be deposited for daily collection from the CB Document Control area.

For further details refer to the Communication Management Plan.

# INSPECTION PROCEDURES

## Material Receiving Inspection

DBP QC staff as early as possible but latest one workday after delivery shall inspect all construction materials prior to use.

To plan and arrange timely material inspections, the Procurement Manager will update the delivery schedule continuously.

Inspection criteria include particularly

* Material identification and documentation, Delivery notes, Test results, Vendor certifications, Certificates of Origin.
* Signs of damage, Reparable, Non-reparable,
* Completeness,
* Compliance with specifications.

Results of the material receiving inspections shall be documented in the “Material Receiving Register” (register 4).

Any identified discrepancy must be resolved prior to re-inspection; otherwise if rectification is not possible, the supplier shall remove the un-approved material immediately.

The Storekeeper will tag newly delivered material highly visible as “Uninspected - Don’t Use”. Only after the inspection is passed and inspection result is verified, the tag shall be removed, and material can be used.

## Material Storage Inspection

QC staff shall continuously watch over and inspect on a weekly basis the storage and handling of all construction materials. Inspection criteria particularly include storage and handling of material in accordance with manufacturer's recommendations as guidelines.

## Off-Site Inspection

If required material sources and fabrication facilities shall be inspected by QC staff to control that specifications are followed, and requirements are implemented. Thus, the delivery of unacceptable materials or intermediate products at site shall be avoided.

## Workmanship Inspection

QC staff will periodically inspect and verify workmanship to ensure that installation, fabrication or whatsoever is executed in line with the specifications and requirements. This inspection is particular important on work items which cannot be rectified later or reworks would become very difficult and cost intensive.

Workmanship Inspection includes both on-site and off-site.

## Equipment and Plant Inspections

All devices, equipment, machines and plants requiring periodical calibration shall be inspected by QC staffs and OSHA.

1. When made available at site it shall be inventoried in the “Inventory Register” (register 5).
2. Calibration and maintenance shall be monitored and controlled and logged regularly.
3. All unsuitable items shall be Red Tagged and repaired, maintained, calibrated or whatsoever and re-inspected before use.

## Management and Services Review

The QA manager will periodically review compliance with established processes and procedures. This inspection shall include both the contractor and sub-contractor(s).

(Please refer to the Process Improvement Plan)

# SUBMITTAL PROCEDURE

Submittals shall be prepared for any type of material or intermediate product intended for permanent use, installation or whatsoever and thereby becoming part of the ready product, regardless whether the item is produced on-site or off-site and regardless whether it is produced by the contractor, sub-contractor, any supplier or fabricator etc.

## Submittal Types

## “Approval” Submittals

“Approval” submittals are the type of submittal for conventional consideration. Examples of “approval” submittals include (but are not limited to) manufacturer’s product data, catalogue cuts, shop drawings, samples, etc.. In accepting an approval submittal it is confirmed that the details of the ready product, finishes and materials are consistent with the design concept, specifications and requirements

## “Review” Submittals

“Review” submittals are the type of submittal for presenting procedures, methods, techniques or sequences prior to implementation. Examples include (but are not limited to) working drawings (i.e. scaffolding, shoring...), proposed equipment, production methods, safety precautions, etc.. In accepting such a submittal, it is acknowledged that the proposed method etc. is sufficient to allow quality control and verification. Acceptance of this type of submittal does not relieve the contractor from the responsibility for insuring that the work is performed in accordance with the terms of the contract.

## “Information” Submittals

“Informational” submittals demonstrate that the contractor has complied with some requirements and/or specifications. Examples include concrete batch records, daily reports, calibration certificates, test reports, etc.. Action is not required for the contractor to proceed with the works. Although these submittals typically are not approved or rejected, but they still need to be reviewed. If the provided information is determined not to comply with contractual documents, a non-conformance report maybe issued.

## Typical Material and/or Vendor Submittal Document

Complete material or vendor submittals generally may include (but are not limited to):

* “Submittal Cover Sheet” (form 2) with o General information (reference number, date, submitter, contact details etc.) o Date when material will be needed at site,

o Short material description, o Area of application, o Material source,

* Table of content,
* Corresponding plans, specifications and requirements,
* Catalogues (or catalogue cuts),
* Data sheets,
* Shop drawings,
* Certifications,
* Work plans,
* QC plans and templates,
* Testing proposals,
* Diagrams, charts and curves,
* Reference letters,
* Operating manuals,
* Material samples,
* Company profile, Organization charts.

Submittals shall be prepared by the supplier, manufacturer, distributor or whoever supplies the material or intermediate product to the project.

Relevant information shall be highlighted.

## Submittal Registration

All submittals shall be submitted to the Document Controller for registration and further distribution to the concerned staffs or departments.

## Submittal Review

Submittals shall be reviewed by the designated QA staff. The Reviewer shall:

1. Upon receipt of a submittal prepare “Submittal Review Sheet” (form 3),
2. Record the submittal in the “Material Submission Register” (register 6),
3. Either
   1. If submittal is insufficient for review through DC return it to the submitter for revision or
   2. Provide the submittal with minor comments and/or recommendations (if any) to the QA Manager.

Upon re-submission the designated staff will

1. Update the “Submittal Review Sheet”,
2. Provide the submittal with minor comments and/or recommendations (if any) to the QA Manager,

The QA Manager will than propose the material to the client or his representative (engineer) and recommend comment solution (if any). For this purpose he passes the submittal to the document controller for register update and submission.

Upon receipt of the client’s or engineer’s approval, comments, or rejection (whatever applicable)

1. The “Material Submission Register” shall be updated by the Document Controller accordingly,
2. A copy of the “Material Review Sheet” shall be returned to the submitter for his further action.

Ideally a submittal shall be prepared and submitted as early as possible granting at least

* 10 workdays processing time to the contractor,
* 10 workdays processing time to the client or his representative.

In cases where specifications, plans and/or requirements (whatever applicable) were made available late

* The processing time by contractor shall be 3 workdays,
* The processing time by client or his representative shall be 3 workdays.

## Submittal Approval

A submittal approval generally does not extend to the means, methods, sequences, techniques, or construction procedures. Following the review, the conventional response is to approve, approve conditionally, or reject the submittal, but only insofar as the end-result conforms to the design concept and complies with the contract documents.

Possible submittal responses are:

* Approved,
* Approved as noted,
* Revise and Resubmit, - Not Approved.

## Approval Stamp

|  |  |
| --- | --- |
| ***[Project Name]*** | |
| **ACCEPTED/APPROVED**   **ACCEPTED/APPROVED AS NOTED**   **REVISE AND RESUBMIT**   **NOT APPROVED**  | |
| Acceptance or approval of this document acknowledges only that the information being provided by the contractor conforms to the applicable requirements or specifications and to the design concept of the completed project as set forth in the contract documents. Contractor solely is responsible for all matters related to fabrication, shipping, handling, storage, assembly, installation, construction (including all safety and environmental aspects of performing the works) and for coordinating the work and the means, methods, techniques, sequences, and procedures of construction to the extent that these items are not specifically addressed by the project specifications or requirements. | |
| By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

## Request for Information

Any clarification of specifications and plans and/or requirements etc. is to be presented using the “Request for Information” (form 4). Requests must be clear and precise. The referenced plan, specification or whatsoever shall be attached and highlighted.

Requests for information shall be prepared by the enquirer as early as possible. The targeted timeframe for RFI submission is 5 workdays after a certain information requiring clarification was made available for the first time.

RFIs shall be passed to the document controller. The DC registers the document in the “RFI Register” (register 7) and distributes it to the concerned staff respective department.

A copy of every RFI shall be passed to the QA department for the sake of process review and improvement.

RFIs must be answered as early as possible and the targeted response time generally shall not exceed 5 workdays. In cases where due to the severity a problem solution within this timeframe is not possible, the enquirer shall be notified through DC that the RFI is under review and further response will be given as early as possible.

RFI response shall be submitted back to the enquirer through DC. The DC updates the RFI register accordingly.

# DEFICIENCY PROCEDURE

The primary goal of the quality program defined in this document is the prevention of nonconformances, reduction of reworks and continuous improvement of processes.

In the unfortunate event that non-conformance couldn’t be prevented any identified deficiencies shall be resolved with the approved plan and/or method in a timely and cost-effective manner and re-occurrence shall be avoided to its maximum extend.

## Preventive Measures

This Quality Management Plan is intended to be proactive, in order to reduce risks and avoid issues and deficiencies. The primer tools and techniques identified for this project in order to meet this target include (but are not limited to)

* Training and qualification,
* Inspections and verifications,
* Submittal management,
* Calibration and maintenance,
* …

Overall quality shall be built in the product rather than to be inspected and rectified in the product.

## Continuous Improvement

The QC and QA manager(s) together with the project manager will review any instances where materials, components, assemblies, features of work, or completed products fail to meet the specified requirements, and will take appropriate action to prevent future occurrences.

All project team and workers are encouraged to suggest improvements.

For further details refer to the “Process Improvement Plan”.

## Non-Conformance Report (NCR)

Identified executed insufficient workmanship or used materials not conforming to the specifications and/or requirements or other non-conformities shall be documented by QC staff in a “Non-Conformance Report” (form 5) and signed by the QC manager.

The Non-Conformance Report will be passed to the document controller for registration in the

“NCR Register” (register 8) and for submission to the QA manager and to the responsible/involved/executing department(s), sub-contractor(s), supplier(s) or whatever applicable.

As a deficiency is corrected, a Corrective Action Report (CAR, form 6) shall be filled out by the executor of the subject works and shall be passed to the document controller for registration and further distribution to the QC manager or his designee.

The NCR remains open until the non-conformance satisfactory is resolved, inspected and approved by the QC manager or his designee and client or his representative (if applicable).

For the avoidance of repetition each NCR also shall be included in the “Lessons Learned” (register 9) and shall be evaluated with regards to process improvement by the QA manager or his designee.

## Site Observation Report (SOR)

Significant deviations of any kind that can be corrected on the spot, but do not justify NCR at the discretion of the inspector are documented and communicated by Site Observation Report (form

7).

Such deviations are promptly resolved on the spot so that the SOR is only for documentation in terms of lessons learned and avoidance of future repetition.

In case of recurrence the SOR may be a precursor to the NCR.

On the other hand, above average positive findings may also be documented in the form of a SOR in order to be recorded as good practice in the lessons learned.

## Corrective Action System

Identified negative quality trends such as repeated NCRs, observations, defects or whatsoever shall be documented by QA staff in a “Corrective Action Report” (form 6) and registered in the “CAR Register” (register 10).

For further details refer to the “Process Improvement Plan”.

# PROJECT RECORDS AND PROJECT DOCUMENTATION

The QA&QC manager with the assistance of all QC and QA staffs establishes and maintains through document controller the quality file which is a part of the project documentation. The purpose of this file is to maintain a complete set of all relevant documents and records. The quality file is a compilation of

* Plans,
* Reports,
* Registers and logs,
* Work orders,
* Change orders,
* Correspondences,
* As-built records,
* Certifications and
* Any other relevant records that provide information on the project.

Under no circumstances documents of whatsoever shall be removed from the quality file, even if superseded. In such case revisions shall be prepared and kept.

## Filing System

The QA &QC department will file its documents (here softcopies) within the projects filing scheme.

Hardcopies and electronic data shall be maintained simultaneously. Each data folder shall be represented by a corresponding box file and vice versa. The names of both box file and data folder shall be same; their contents consequently shall be same.

## Filing Scheme

|  |  |  |  |
| --- | --- | --- | --- |
| **Level 1**  ~~Document.docx~~ | **Level 2**  ~~Document.docx~~ | **Level 3**  ~~Document.docx~~ | **Level 4** |
| **05\_Quality** | **051\_Initiation** | [empty] |  |
| **052\_Planning** | 0521\_Quality Mgmt |  |
| **053\_Execution** | 0531\_Quality Assurance |  |
| **054\_Monitor&Control** | 0541\_Quality Control |  |
| **055\_Closure** | [empty] |  |

It is undisputed that further folders may be required over time to sort files in a logic and manageable order.

However

1. No new folders shall be created on folder level 1 and 2, nor shall any existing folder be renamed and no data files such as e.g. word files, excel spreadsheets, drawings, PDF-files, images or whatsoever shall be saved at this level.
2. Folders on folder level 3 shall not be renamed and no data files such as e.g. word files, excel spreadsheets, drawings, PDF-files, images or whatsoever shall be saved at this level. On level 3 limited additional folders can be created upon approval by the responsible manager.
3. Preferably additional folders only shall be created on level 4. The responsible manager must be consulted, and the filing scheme must be updated and communicated accordingly.

## Data Backup

All electronic data shall be backed up regularly.

Further details with regards to correspondences, data storage and data integrity etc. as well as the complete project filing scheme can be found in the Project Communication Management Plan.

# TESTING

Testing shall be performed, recorded and reported and test results shall be verified under the responsibility of QC staffs to ensure that specifications and requirements are met.

Prior to the first execution of a new work item testing methods and frequency of testing shall be reviewed, communicated to concerned staffs and shall be in line with applicable standards, contractual requirements, plans, approved method statements or whatever agreed upon.

## General Testing Procedure

1. Not less than 24 hrs. prior to any testing client or his representative by means of “Inspection and Test Request” (form 1) shall be notified of the testing and may then at their own discretion decide to attend the testing or not.
2. Prior to any test the QC staff shall verify that
   1. Required equipment is available and calibrated,
   2. Testing criteria and procedure are known,
   3. Personnel are capable to perform test and operate equipment.
3. Upon verification of requirements the test may proceed and shall be witnessed and documented by QC staffs using a test specific form. Standard forms provided by a 3rd party testing organization (if applicable) shall be acceptable.
4. All test results shall be
   1. Registered in the “Test Register” (register 11) and compiled in the quality file, b) Verified by QA staffs,

c) Submitted to the client or his representative (if required).

1. Any failing test result shall be recorded in the “Deficiency Register” (register 12) and the test shall be repeated as early as possible (unless otherwise agreed). Failed tests shall be subject to review with regards to process improvement.

## 3rd Party Testing

If testing by a third-party laboratory is required, whether on-site or off-site, QA staffs shall be responsible to verify 3rd party’s compliance to applicable standards and therefore shall review laboratory’s historic data such as QA & QC procedures, calibration records, logs for similar testings etc.3rd party testing organizations not being able to provide such records shall be avoided if possible. In case of regular testing the review maybe carried out periodically.

A 3rd party testing organization shall be capable to perform a required test within 2 workdays (if applicable) from receipt of samples.

The QC Manager at his discretion together with client or his representative may decide in general or case-by-case if witnessing the test by QC staff is required. Client or his representative may decide at their own discretion to attend and witness the testing.

In any case 3rd party test results shall be verified by their own senior laboratory personnel.

## Test Results

Ideally the original test record shall be submitted to the QC department within 48 hrs from the test. Advance copies of successful tests sent by fax and/or email shall be deemed acceptable in order to proceed with the works.

Once test results are received, they shall be registered and distributed by document controller and shall be verified by QC staffs as to:

* Completeness of documents,
* Observance of the specified testing procedures,  Acceptability of results.

## Test and other Equipment Calibration and Maintenance

Test and measurement equipment shall be regularly maintained and calibrated according to the manufacturer’s specifications and recommendations. The service provider shall provide calibration and maintenance records. (To be read in conjunction with equipment and plant operating inspection procedure.)

# DEFINITIONS

For the purpose of this plan and any further document developed through its use the following terms are used:

|  |  |
| --- | --- |
| **Quality Control**  **(QC)**  **Dutch Brothers Plus Quality Control**  **(DBP-QC)** | These are city, county, and state employees that inspect for building code compliance.  The primary objective of DBP- QC is to anticipate potential risks and issues with regards to the grade of quality. The QC measures are to be adequate to cover all operations both on-site and off-site. |
| **Quality Assurance**  **(QA)** | The primary objective of QA includes verification, audits and evaluations of implementation of the quality control system by the contractor, its sub-contractors and suppliers. |
| **May** | means an optional action |
| **Shall** | means a mandatory action |
|  |  |
|  |  |
|  |  |

# ACRONYMS AND ABBREVIATIONS

CAR .............................. Corrective Action Report

COO ............................. Certificate of Origin

DC ................................ Document Control(ler)

Insp. ............................. Inspection

IR .................................. Inspection Register

ITR ................................ Inspection and Test Request

NCR .............................. Non-Conformance Report

PQMP ........................... Project Quality Management Plan

QA ................................ Quality Assurance

QC ................................ County Building Inspectors

DBP-QC .........................Dutch Brothers Plus Quality Control

QMP ............................. Quality Management Plan

RFI ................................ Request For Information

|  |  |
| --- | --- |
| **APPENDICES** |  |
| Attachments:  Attachment 1 | Project Site Layout Plan |
| Attachment 2 | Organizational Chart QA & QC dept. |
| Checklists:  Checklist 1 | Preparatory Meeting Checklist |
| Checklist 2 | Initial Inspection Checklist |
| Checklist 3 | Follow-up Inspection Checklist |
| Forms:  Form 1 | Inspection and Test Request |
| Form 2 | Submittal Cover Sheet |
| Form 3 | Submittal Review Sheet |
| Form 4 | Request For Information |
| Form 5 | Non-Conformance Report |
| Form 6 | Corrective Action Report |
| Form 7 | Site Observation Report |
| Registers:  Register 1 | Inspection Register |
| Register 2 | Completion Inspection Register |
| Register 3 | Material Receiving Register |
| Register 4 | Inventory Register |
| Register 5 | Material Submission Register |
| Register 6 | RFI Register |
| Register 7 | NCR Register |
| Register 8 | Lessons Learned Register |
| Register 9 | CAR Register |
| Register 10 | Test Register |
| Register 11 Deficiency Register | |

## Records:

Record 1 Daily Activity Records