**QUALITY MANAGEMENT PLAN**

**THE CONTRACTOR**

**MISSOURI DEPARTMENT OF TRANSPORTATION**

**PROJECT NUMBER**

**JXPXXXX**

**CONTRACT ID**

**XXXXXX-XX**

**PREPARED BY:**

**THE CONTRACTOR**

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**PREFACE**

 **CONTRACTOR NAME** is the prime contractor responsible for constructing the Route XX Project from south of Route XX to Route XX. The Project is in a MO State County and the MoDOT Job Number is JXPXXXX. The Project consists of approximately XX miles of grading, drainage, alternate and optional paving, and a bridge to improve this section of Route XX.

**The State of Missouri** is the owner of the Project. It isrepresented officially by the Missouri Department of Transportation (MoDOT).

This document has been prepared to present the Quality Management responsibilities of **CONTRACTOR NAME** and **its SUBCONTRACTORS (list).**

**APPROVALS**

Submitted by:  The Contractor Quality Manager

Signature: Date:

Approved by: The Contractor Project Manager

Signature: Date:

Approved by:  MoDOT Resident Engineer

Signature: Date:

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**1.0 SCOPE**

**1.1** **Quality Management Plan (QMP)**

This document has been prepared to meet the requirements of Section XX. QUALITY MANAGEMENT (Version – 10/2013) of the Job Special Provisions for MoDOT Job No. JXPXXXX. This Quality Management Plan describes the practices and procedures that CONTRACTOR NAME will use to to perform all quality control sampling, testing and inspections necessary to control production and construction processes applicable to this project to ensure all materials and workmanship incorporated into the project meet the requirements of the plans, specifications, and contract documents. The QMP will be maintained and revised as necessary during the project.

**2.0 REFERENCE DOCUMENTS**

The following are reference documents from which this QMP was derived:

* MoDOT Job No. JXPXXXX Section XX. Quality Management of the Job Special Provisions
* 2011 Missouri Standard Specification Book for Highway Construction
* General Provisions and Supplemental Specifications to 2011 Missouri Standard Specifications – XX/XX/XXXX
* 2009 Missouri Standard Plans for Highway Construction
* Supplemental Plans to 2009 Missouri Standard Plans – XX/XX/XXXX

**3.0 QUALITY CONTROL & PRODUCTION ORGANIZATION**

**3.1 Purpose**

To provide a description of the duties and responsibilities of all CONTRACTOR NAME personnel involved in any quality control or production decision making capacity.

**3.2 Quality Control Personnel**

The goals of the Quality Control Personnel are to provide inspections and tests of CONTRACTOR NAME and subcontractors/suppliers work activities to ensure compliance with approved design plans, contract, project specifications, and special provisions.

**3.2.1 Quality Control Personnel Duties and Responsibilities**

**Quality Manager (QM)** – The Quality Manager is responsible for the overall management, coordination, supervision, and performance of all Quality Control activities performed by or on behalf of CONTRACTOR NAME as outlined in this plan. The QM will be separate from the manager of the work activities. The QM qualifications are included in Appendix XX.

QM responsibilities:

* Development, implementation, management and revision of the Quality Management Plan (QMP)
* Identify processes or activities that require a Work Plan and prepare said document
* Coordinate with Production Personnel to ensure QC Testing and Inspection is scheduled and performed in accordance with the contract requirements.

* Oversee Quality Control document management activities to ensure QC records are appropriately updated and organized
* Ensure each Subcontractor has an approved quality control plan and ensure it is implemented and managed accordingly
* Ensure the QC test and inspection reports are reviewed and approved by authorized personnel
* Ensure all project materials meet or exceed specified requirements and document receipt of materials with associated documentation via Materials Receiving Inspection Report
* Ensure QC testing and inspection personnel maintain copies of credentials
* Attend Construction Pre-Activity Meetings and distribute and review QC testing and inspection requirements and procedures for the work element
* Review all Non-Conformance Reports (NCR) and lead the resolution process
* Develop, review, and implement corrective action plans to address systemic issues within the QC organization

**Quality Control Testers** – CONTRACTOR NAME Quality Control Testers will perform testing and sampling during construction as outlined in the Inspection & Test Plan (ITP) and Work Plan. The QC sampling and testing will be performed by QC Testers certified through the MoDOT Technician Certification Program or a certification program preapproved by MoDOT. The QC Testers report directly to the Quality Manager.

QC Tester responsibilities:

* Perform required tests and document test in accordance with contract documents
* Conduct material sampling and testing in conformance with the appropriate methods and frequencies
* Ensure all measuring and test equipment is properly maintained and calibrated
* Promptly communicate nonconformance material to QM and production staff

**Quality Control Inspectors** – CONTRACTOR NAME Quality Control Inspectors will have a thorough understanding of the contract requirements and will perform inspections during construction to ensure the quality of the work meets or exceeds contract specifications. The QC Inspector will be knowledgeable of the work he/she is inspecting and will be able to recognize conforming and nonconforming work and material. The QC Inspector reports directly to the Quality Manager.

QC Inspector responsibilities:

* Perform required inspections and complete checklists in accordance with contract documents
* Ensure inspection observations are included on Daily Inspection Report (DIR)
* Ensure material is conforming to the contract requirements before being incorporated into the work
* Promptly communicate nonconformance material and work to QM and production staff

**3.3 Production Personnel (Superintendent/Foreman)**

Production Personnel will coordinate QC inspection and testing requirements with daily construction operations performed by CONTRACTOR NAME and Subcontractor by communicating the work schedules with the QM.

Production Personnel responsibilities:

* Schedule and lead Pre-Activity Meeting
* Develop and distribute a Weekly Schedule to MoDOT that outlines project activities for the following two-week period and identifies required hold points.
* Complete Daily Inspection Report (DIR)
* Promptly communicate nonconformance material and work to QM

**3.4 Organizational Chart and Qualifications**

* All CONTRACTOR NAME personnel described in Section 3.0 are listed in the name-specific organizational chart in Appendix XX.
* All QC Testers and their areas of testing certifications are included in Appendix XX
* All QC Inspectors and their responsible areas of inspection are included in Appendix XX

**4.0 PROJECT QC IMPLEMENTATION**

**4.1 Scheduling and Work Planning**

* + 1. **Weekly Schedule**

Weekly progress meetings will be held on this project. Many topics will be discussed but the focus of the meeting will be the Weekly Schedule that outlines the planned project activities for the following two-week period. The Weekly Schedule will include all planned work with locations, identification of new activities, upcoming pre-activity meetings, traffic control events, and requested hold point inspections for the period. Copies of the Weekly Schedule will be distributed at the start of the weekly progress meeting. If necessary, a revised weekly schedule will be posted promptly after the meeting. An example of the Weekly Schedule is included in Appendix XX.

* + 1. **Work Plan**

The Work Plan will be a detailed description of procedures necessary to achieve a compliant end product. A Work Plan will be completed for each project activity. The Work Plan will be submitted to MoDOT for review at least 1-week prior to the pre-activity meeting. The Work Plan will consist of but is not limited to the following: a safety plan, work sequence, affected Contract Line Items, list of materials, necessary inspections and tests along with their frequencies, document management, responsibility of CONTRACTOR NAME QC Staff, stages of work that will require Hold Points, subcontractor responsibilities, duration of activity, activity milestones, traffic impacts, etc.. A list of project activities that require a Work Plan and a sample Work Plan are included in Appendix XX.

* + 1. **Pre-Activity Meeting**

The Pre-Activity Meeting is necessary to discuss details of the Work Plan and schedule. The Pre-Activity Meeting will be held 24-hours prior to the start of each new project activity or change in work crew. The Superintendent/Job Foreman of the activity will lead the meeting and others present at the meeting will be the Quality Manager, CONTRACTOR NAME QC Inspection and Testing Staff, and MoDOT.

**4.2 Inspection and Testing**

Inspection and testing are performed during all phases of the work from start to completion to ensure the work and testable material (asphalt, concrete, aggregate, etc.) meets or exceeds the contract requirements. CONTRACTOR NAME will perform inspection and testing of the work and material as specified in the Inspection and Testing Plan and MoDOT-provided checklists. All results will be documented on either a Quality Control Checklist or Test Record included in Appendix XX.

**4.2.1 Inspection and Testing Plan (ITP)**

The Inspection and Testing Plan (ITP) outlines the acceptance criteria for contract items for this project along with the required tests, testing frequency, and the required QC documentation. The ITP is provided by MoDOT. CONTRACTOR NAME has only modified the ITP to delete items of work that are not in the contract. Any changes to the specifications, testing procedures, or the testing frequencies from the standard ITP will be implemented via change order. In addition, a change order will be completed to add acceptance criteria for nonstandard contract items not included in the standard ITP. The ITP is attached in Appendix XX.

**4.2.2 Daily Inspection Report (DIR)**

A Daily Inspection Report (DIR) will be completed on the project each day to document pertinent project activities. The report will include a detailed diary that describes the work performed as well as observations made by QC Inspection staff regarding quality control. The DIR will include other items such as weather conditions, location of work, installed quantities, tests performed, and a list of all subcontractors that performed work on that date. The DIR indicates the responsible person that filled out the document and is digitally signed.

If necessary, additional Daily Inspection Reports will be submitted for a single day’s project activities during multiple project operations.

**4.2.3 Hold Points**

Hold Points are events in the work process that require approval from MoDOT prior to continuing work. Hold Points occur between different definable stages of work when the succeeding work depends on the acceptance of the preceding work. A list of minimum Hold Points is attached in Appendix XX. Additional Hold Points can be added by MoDOT.

Hold Point inspections will be at times planned in the Weekly Schedule. The Hold Points may be rescheduled as needed, but CONTRACTOR NAME will provide a minimum 24-hour advance notification to MoDOT, unless otherwise approved by MoDOT.

Prior to all Hold Point inspections, CONTRACTOR NAME QC Staff will provide MoDOT with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Materials Receiving Inspection Reports for the work performed leading up to the Hold Point. MoDOT-identified issues will be corrected prior to continuing work and a new Hold Point scheduled.

**4.3 Material Receiving**

Material Receiving is assurance that products and materials are identified from receipt and during all stages of production, delivery and installation. At receipt, CONTRACTOR NAME QC Staff will inspect general condition of material and determine if material is compliant based on the requirements specified in the ITP, Specifications, Job Special Provisions, Standard Drawings, or other pertinent contract documents. For products that require on-site inspection by MoDOT Materials staff, the QM will notify MoDOT staff promptly to schedule the inspection.

Some materials are pre-qualified or pre-accepted for use on MoDOT projects. A list of these items is maintained by MoDOT and can be found on the MoDOT internet site. These lists include: Pre-Acceptance List (PAL), Approved Product List (APL), Bridge Pre-qualified Products List (BPPL), and the Qualified List (QL). Although pre-qualified or pre-accepted, appropriate documentation detailed in the Specifications will accompany these products for acceptance.

All material delivered to the project, excluding testable material, will be inspected for appropriate dimensions, quantity, condition, markings, etc., and accompanied with appropriate documentation. This information will be documented on the Material Receiving Inspection Report found in Appendix XX. Any certifications, test reports, tags, etc. will be attached to the Material Receiving Inspection Report. Only material compliant with the contract documents and documented, as previously described, will be incorporated into the project.

**5.0 QUALITY DOCUMENTATION**

Project documentation (inspection checklists, daily inspection reports, test records, Materials Receiving Inspection Reports, etc.) referenced in this plan will be electronically stored and organized by CONTRACTOR NAME QC Staff. The web-based document management system that will be used is MoDOT’s SharePoint. The SharePoint file structure and file naming convention is shown in Appendix XX.

Project documentation will be electronically saved to SharePoint within 12-hours after the work shift ends.

Our verification procedure to ensure all required documents are on SharePoint will consist of electronically submitting a semi-monthly list of contract line items with measured quantities for completed work along with all supporting project documentation with its file path. This will be submitted the 15th and 30th of each month. The submittal of the final list of contract line items will serve as the final verification step.

**6.0 CONTROL OF NON-CONFORMING WORK AND MATERIAL**

Non-conformance reporting will be used to identify and ensure that work, material, and/or processes (i.e. QC inspections, tests, documentation, etc.) that fail to satisfy the contract requirements are identified and promptly resolved. QC staff or production staff will identify non-conformances and the QM will document using the Non-Conformance Report (NCR) form found in Appendix (XX). MoDOT may also initiate an NCR.

The NCR process is as follows:

1. Non-conforming work and/or material are identified.
2. NCR is issued on the provided standard form.
3. QM forwards copy of NCR to MoDOT with proposed resolution.
4. MoDOT either approves or rejects the proposed resolution. A dialogue will ensue following any rejected proposals until an acceptable solution is identified.
5. The MoDOT-approved resolution is executed.
6. New inspection and/or test of previously identified non-conforming item is completed.
7. QM verifies previously identified non-conforming item is now compliant and requests final approval from MoDOT.
8. MoDOT evaluates previously identified non-conforming item. If accepted, MoDOT signs NCR for closure.

For recurring non-conforming items that are the same, or similar in nature, will result in Corrective Action as detailed in Section 7.0.

**7.0 CORRECTIVE ACTION**

In the event that a non-conforming condition persists or the severity of the condition meets at least one of the criteria below, then either the QM or MoDOT issues a Corrective Action Request to the Project Manager. If the QM and/or MoDOT consider it necessary, the Project Manager will be requested to stop the work that has caused the problem, or in some instances, stop all work on the project. The form for the QM issued Corrective Action Request can be found in Appendix XX. A MoDOT issued Corrective Action Request will likely be in the form of a MoDOT Order Record.

A Corrective Action Request is typically issued for the following conditions:

* Recurring or systemic non-conformances
* A situation that threatens public and/or worker safety, could severely damage a utility, reduces the integrity of an existing or new structure, reduces the life span of the work, causes excessive rework or repair, or results in work that deviates from the contract requirements

The Corrective Action Request Process will be as follows:

1. Corrective Action Request is issued by QM or MoDOT
2. If necessary, work is stopped.
3. QM submits solution to MoDOT for review.
4. MoDOT approves solution.
5. Proposed corrective action solution is implemented.
6. QM notifies MoDOT corrective action solution has been implemented and schedules review.
7. MoDOT and QM accept implementation.
8. Corrective Action Request closed and work can resume

**8.0 OTHER APPLICABLE QC PLANS**

Subcontractors will develop, implement, and maintain their own Quality Control Plan *(submitted and approved prior to start of work*) or adopt CONTRACTOR NAME plan. This will be specified on the Subcontractor Quality Management Agreement form, found in Appendix XX.

Subcontractors will designate and submit the names of the QC Representative and all QC personnel to be responsible for assuring the work is constructed in conformance with the contract documents. The QC Representative will perform inspections/testing or QC procedures required to control the work.  The QC Representative may be a foreman, superintendent, project engineer or other individual with the proper experience and authority. CONTRACTOR NAME QM will be responsible for all work that the Subcontractor’s QC Representative reports to CONTRACTOR NAME QM.

**9.0 REVISIONS TO THE QUALITY MANAGEMENT PLAN**

The processes and procedures identified in the Quality Management Plan are dynamic. Revisions and additions will be issued as the program requires refinement or adaptation.

Changes to the QMP shall be the responsibility of the Quality Manager. MoDOT will have final approval of all revisions to the QMP prior to implementation.