Bituminous Concrete Quality Control Plan Outlines

These Quality Control Plan (QCP), Project Summary Sheet and Extended Season Paving outlines are for the bituminous concrete placement section of the QCP that are required by the specifications to be submitted by the Prime Contractor. The Quality Control Plan is required to be submitted once per calendar year – amendments/revisions may be made and shall be submitted as needed. All of the outline formats are required and shall assist the Prime Contractor in providing the specified information required by the general description found in the specifications to assess the process and organization of the placement and compaction operations during placement of bituminous concrete.

The **QCP** shall be valid for a single calendar year and shall expire at the end of the calendar year in which it was submitted. It shall be submitted at the pre-construction meeting or a minimum of 30 days prior to any paving activities.

The **Project Summary Sheet** will be required for each specific project, containing project specific information. It shall be submitted at or prior to the pre-paving meeting.

The **Extended Season Paving Plan** will be required for projects that will pave during the specification defined Extended Season. The separate outline requirements are described below.

QCP Requirements:

1. **Title Page**
    a. Contractor's Name
    b. Plan Description
    c. Submittal Date (updated if revised)

2. **Table of Contents**
    a. Sections and corresponding page numbers

3. **Paving and Quality Control Personnel**
    a. Plan Manager (Prime Contractor)
        i. Qualifications, authority and responsibilities.
        ii. Contact information
    b. Process Control Technician(s) (Placement procedures)
        i. Qualifications, authority and responsibilities
        ii. Contact information
    c. Quality Control Technician(s) (density testing)
        i. Qualifications, authority and responsibilities
        ii. Contact information
        iii. Name and contact information of the Radiation Safety Officer (RSO) if using a nuclear density gauge

4. **Best Paving Practices and Paving Equipment**
    a. List of equipment including pavers, rollers and material transfer vehicle (MTV) including axle load information, type of automated grade and slope control, lighting for night work and secondary joint compaction device.
    b. Maximum paver speed
    c. Equipment breakdown (procedures or actions to be taken)
    d. Longitudinal joint (notched wedge joint application) construction device and compaction method, monitoring for compliance, additional warning signs)
    e. Procedure for generating a Compaction Curve for establishing a rolling pattern (thin lifts, ultra-thin, special mixes, etc.)
    f. Inclement weather procedures (Specify personnel responsible, address procedures, etc.)
    g. Extended Season paving operations may be submitted as a supplement to the QC Plan for approval prior to Extended Season paving operations

5. **QC Process Control and Testing Equipment**
    a. Process for balancing operation, tack coat application visual inspection, monitoring for segregation, haul units, etc.
    b. Mix delivery temperature range, minimum placement ambient/surface temperatures
    c. Process for establishing and modifying rolling pattern
    d. Type of testing devices for density and temperature
    e. Procedure for process control cores (including cores to be used for the density gauge correlation process)
    f. Minimum density testing frequency at time of placement
    g. Test result procedure (documentation and timeline for submittal)

6. **Troubleshooting**
    a. Procedures for corrective action of non-conforming materials or workmanship (i.e. equipment problems, density, mat or joint issues
    b. Documentation of actions taken

7. **Core Sampling for bituminous concrete Acceptance**
    a. Procedure, equipment and schedule
    b. Personnel information

8. **Dispute Resolution**
    a. Procedure, equipment and schedule
    b. Personnel information

QCP Project Summary Sheet requirements

1. **Title Page**
    a. Contractor's Name
    b. Plan Description
    c. Submittal Date (updated if revised)

2. **Table of Contents**
    a. Sections and corresponding page numbers

3. **Paving and Quality Control Personnel**
    a. Plan Manager (Prime Contractor)
        i. Contact information
    b. Process Control Technician(s) (Placement procedures)
        i. Qualifications, authority and responsibilities
        ii. Contact information
    c. Quality Control Technician(s) (density testing)
        i. Qualifications, authority and responsibilities
        ii. Contact information
        iii. Name and contact information of the Radiation Safety Officer (RSO) if using a nuclear density gauge

4. **Material**
    a. Producer (Bituminous concrete source of supply)
    b. Polymer Modified Asphalt (PMA), Warm Mix Asphalt technology (if applicable)
    c. Temperature ranges for mixes not noted in the general QC plan (PMA, WMA, Ultra-thin, etc.)
    d. Tack coat source of supply

5. **Paving Equipment**
    a. Paver, attachments (automatic grade and slope control, longitudinal joint device and secondary compaction equipment for notch wedge joint) specific to the project
    b. Roller(s) specific to the project
    c. Material Transfer Vehicle (MTV) (if applicable)

6. **Paving Sub-Contractors (If applicable)**
    a. Sub-contractor's name
    b. Personnel
        i. Authority and responsibility if performing QC duties
    c. List of equipment (see Item #5 above)

Extended Season Paving Plan requirements:

The Extended Season Paving Plan is submitted for paving that will take place during the Extended Season (October 15th – April 30th). The Extended Season Paving Plan shall be submitted per project, per calendar year, when paving activities are scheduled during the Extended Season. The plan shall be submitted and approved by the Engineer prior to any pavement being placed during the Extended Season.

Extended Season Paving Plan for Project XXXX-XXXX
(Project Description)

- General Contractor: _____
- Paving Sub-Contractor: _____
- Anticipated Paving Dates: _____
- HMA Plant (Supplier): _____
- Minimum Mix Delivery Temperature: _____
- Average Haul Distance: _____
- Average Haul Time: _____
- Number of Trucks: _____
- Heated/Insulated Body Trucks (Y/N): _____
- Day or Night Paving: _____
- Tons to be placed per day/night: _____
- Maximum Paver Speed (ft/min): _____
- Number of Paver Passes: _____
- Average Maximum Paving Length: _____
- Average Compacted Lift Thickness: _____
- Number of Rollers Assigned: _____
- Additional Comments: _____