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| fhwa_shield | Federal Highway Administration – Missouri Division | | | |
| **Focused Review - PCC Pavement Construction** | | | |
| MoDOT Job # |  | Federal Project # |  |
| Contract # |  | Inspection Date |  |
| MoDOT District |  | Report Date |  |
| Contractor |  | MoDOT RE |  |
| % Time Elapsed |  | % Work Complete |  |
| Inspected By |  | | |

| **Question** | **Yes** | **Partial** | **No** | **N/A** | **Comment** | Questions | *MoDOT Spec/Plan Reference* |
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| ***Pre-Paving/Contractor Quality Control Plan*** | | | | | | | |
|  |  |  |  |  |  | Was a pre-paving meeting conducted separate from the pre-construction meeting and documented by MoDOT? *(Meeting minutes documenting discussion of QC Plan/other paving-related details)* |  |
|  |  |  |  |  |  | MoDOT/LPA has approved Contractor Quality Control Plan in the project file? | *502.11* |
|  |  |  |  |  |  | Mix designs have been submitted by the Contractor approved by MoDOT?  *(Submittal of Contractor QC Plan with required information prior to approval of mix designs)* | *501.3* |
|  |  |  |  |  |  | Re-Dosing Plan has been submitted by the Contractor and approved by the RE prior to paving? | *501.10.4* |
| ***Plant Operation/Laboratory Accreditation*** | | | | | | | |
|  |  |  |  |  |  | Has the central mix drum plant or mobile paving plant tested and inspected, plant scales and metering devices calibrated, certified and verified, with documentation provided to the RE? *(Annual calibration for central mix drum plant/RE witnessed at beginning of production for mobile plant)* | *501.8* |
|  |  |  |  |  |  | Material stockpiles separated to prevent cross contamination and well drained to prevent saturation? |  |
|  |  |  |  |  |  | Quality Control testing is being performed by a MoDOT approved Contractor Laboratory and Agency Verification testing performed by a qualified MoDOT Laboratory? | *601* |
| ***Surface/Grade Preparation*** | | | | | | | |
|  |  |  |  |  |  | Base material has been adequately compacted, trimmed to plan elevation and free of damage from construction traffic prior to paving? *(Accepted at hold point prior to beginning paving operations)* |  |
|  |  |  |  |  |  | All grade control functions performing properly to ensure pavement is placed at specified line, grade, and cross section? *(Final check immediately ahead of paving operation – string line supported tight with no sag/adequate survey control for stringless paving)* |  |
|  |  |  |  |  |  | Load transfer dowels and tie bars have been placed at the required depth and spacing, with dowel bar centerline marked on grade to accurately locate sawed contraction joint? *(dowel baskets adequately pinned to base preventing displacement, shipping pins cut, dowels properly coated with release agent)* |  |
| ***Paver Operation*** | | | | | | | |
|  |  |  |  |  |  | Slip form paver are producing a smooth, dense and homogeneous pavement? *(Vibrators/tamping elements stopped when no forward movement, no edge slump, surface irregularities or material segregation)* | *502.3.2.1* |
|  |  |  |  |  |  | Slip form paver and hand vibrators are being used according to specification?  (> *4500 impulses per minute as confirmed onsite by tachometer and recorded in Daily Work Report)* | *502.3.3* |
|  |  |  |  |  |  | Safety EdgeSM constructed as specified?  (Constructed monolithically with the shoulder producing 30° bevel at outside edges) | *Std. Plan 401.00C* |
| ***Finishing/Curing*** | | | | | | | |
|  |  |  |  |  |  | Additional moisture to complete the final finishing operation applied as specified?  *(Applied only in the form of a fine pressure spray/fog spray, with placement of additional concrete discontinued)* | *502.4.8.2* |
|  |  |  |  |  |  | Surface texturing applied as specified? *(Sand patch test if turf drag, otherwise waived if transverse or longitudinal tining or diamond grinding is used as the final surface texture)* | *502.4.8.3* |
|  |  |  |  |  |  | Edging tool used on all edges of pavement and each side of transverse joints to produce the desired finish?  *(A well-defined and continuous radius of approximately 3/8 inch having a smooth dense finish)* | *502.4.8.4* |
|  |  |  |  |  |  | White pigmented membrane curing material applied uniformly to entire surface and exposed edges of pavement? *(Application rate = 1.2 gal per 15'Lx14'W pavement panel.)* | *502.6* |
| ***Joint Forming/Sawing/Sealing*** | | | | | | | |
|  |  |  |  |  |  | Joint forming device is being used properly to establish longitudinal joints?  *(Use indicated in approved QC Plan. Depth and weak plane verified visually and by coring)* | *502.5.3.1* |
|  |  |  |  |  |  | Sawed contraction joints have been created without excessive raveling and before uncontrolled shrinkage cracking occurs?  *(Standard wet saws used with satisfactory results, otherwise lightweight early-entry dry saws required)* | *502.5.3* |
|  |  |  |  |  |  | All contraction joints >¼" wide and other joints have been sealed as required? *(Sealed prior to any construction traffic/thoroughly cleaned and dried immediately prior to sealing)* | *502.5.4* |
| ***Construction Inspection*** | | | | | | | |
|  |  |  |  |  |  | Has Central/Truck Mixed Concrete been delivered to point of placement as specified?  *(Mixer trucks have rating tags, mix revolutions <300, field water adjustments documented,* ***delivery tickets with required information*** *etc.)* | *501.8* |
|  |  |  |  |  |  | Roadway inspectors have reviewed each load of mix for acceptance and rejecting any batch that does not comply with specifications?  *(Reasons for rejecting mix; contaminated, segregated, improper slump, adjusted air content <4.5% or >9.0%)* | *502.10.4.4* |
|  |  |  |  |  |  | All field re-dosing has been performed as specified in the approved Re-Dosing Plan?  *(Only 1 re-dose attempt per mixer truckload, test each subsequent truckload of material enroute, reject all if plant not contacted immediately)* | *501.10.4* |
|  |  |  |  |  |  | All adjustments to the approved mix design have been discussed with RE prior? *(Field adjustments within tolerance from approved mix design – otherwise field redesign and approval required)* | *502.11.7* |
|  |  |  |  |  |  | Finished pavement opened to traffic as specified? *(Low-volume light construction traffic at 2500 psi min, all other traffic at 3,000 psi min with surface cleaned and joints sealed.)* | *502.9* |
| ***Material Sampling/Testing*** | | | | | | | |
|  |  |  |  |  |  | All Technicians assigned to the project have been certified by MoDOT for sampling and testing performed on the project?  *(MoDOT and Contractor - Verify by checking technician certification cards)* |  |
|  |  |  |  |  |  | All Technicians performing materials sampling and testing for the project have been audited on those tests by a MoDOT Independent Assurance (IA) Auditor within the past 12 months? |  |
|  |  |  |  |  |  | All project materials accepted through the Pre-Acceptance List (PAL)have be properly marked and documented in project files? *(Curing compound, dowel bars, tie bars etc.)* |  |
|  |  |  |  |  |  | Is sampling of fresh concrete performed as specified? *(Central or truck mixed concrete approx. 1CY discharged prior to sampling; otherwise sampled at 3 or more regular intervals during discharge of entire batch)* | *501.4* |
|  |  |  |  |  |  | Corrective action have been taken for out of compliant loads and each subsequent truckload of material enroute and tested for compliance?  *(gradation, air, slump, compressive strength etc.)* | *502.11.3* |
|  |  |  |  |  |  | Tamper proof bags have been used to preserve chain of custody for Agency Acceptance (QA) cores? *(QA cores not in possession of the engineer shall be sealed in tamper proof bags after extraction)* | *502.12.2* |
|  |  |  |  |  |  | Sampling and testing of fresh concrete from behind the paver has accounted for air loss through the paver performed as specified? *(random sampling a minimum of once per half-day production – subtracted from air content measured in front of paver to determine minimum net air content of 5%)* | *502.11.2.3* |
| ***Material Acceptance*** | | | | | | | |
|  |  |  |  |  |  | Unacceptable material represented by failing tests have been rejected or removed and replaced? *(Failing tests: core thickness <90% plan thickness; f'c <3,500 psi; entrained air content <4.0%)* | *502.13* |
|  |  |  |  |  |  | Pavement accepted on a lot-by-lot basis are using Quality Level Analysis of QC and QA test results to determine Percent Within Limits and payfactor? | *502.10* |
|  |  |  |  |  |  | Measured pavement smoothness has been accepted as specified? *(Based on Contractor collected and reported IRI data which is verified by MoDOT collected IRI data representing at least 10% of the pavement.)* | *610* |
|  |  |  |  |  |  | Are all payfactors for all pavement lots at least 100%? *(If No, comment required)* |  |

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| **Question #** | **Y/N** | | | Comments |
|  | **Best Practice** | **Major Finding** | **Issue Resolved** |  |
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