# Local Agency Program Construction

Contract Management Conference March 29, 2017

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Construction Field Services (Central Office)

Lansing (Dimondale), MI



### Code of Federal Regulations, Title 23 (Highways)



State DOT responsible for <u>all</u> federal-aid highway projects <u>developed & delivered</u> in their state

http://www.fhwa.dot.gov/legsregs/directives/cfr23toc.htm

# MDOT TSC Designated Representative/Designee



Construction Liaison between MDOT/Local Agency

Provides Assistance/Guidance

Oversight for State/Federal Conformance

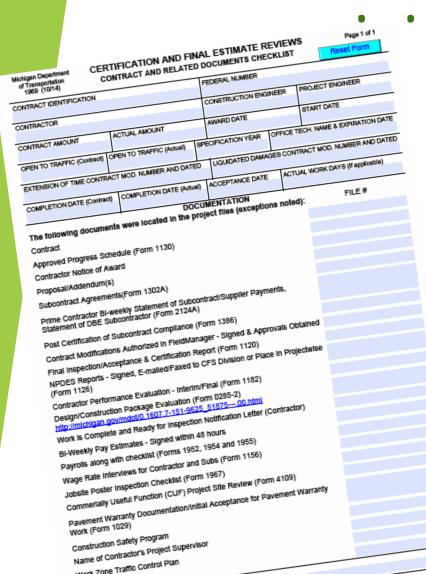
## TSC DR's Phases of Involvement

- Base Plan/Plan Review Meeting (GI)
- Pre-Construction Meeting
- Interim Project Assistance/Guidance
- Interim Site Visit
- Contract Modification Approvals
- Final Inspection
- Contractor Claims
- Project Close-out

#### LA's CE Responsibilities

- Keep in contact with DR's
- Material testing/documentation
- Field Inspection
- Wage Rate Interviews
- DBE CUF Monitoring
- Subcontract collection/submittal to MDOT
- Prompt Payment Compliance
- Follow MDOT Specification Book
- Not an all-inclusive list!

### Think with the end in mind



| Michigan Department Of Transportation 1971 (02716) CERTIFICATION AND FINAL HMA ITEMS CHE |        | REVIEW | vs                                                                                                         |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
|------------------------------------------------------------------------------------------|--------|--------|------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------|-----------------------|------------------------|---------------------|------------------------------|--|
| CONTRACT ID                                                                              |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        | 0.0                                   | Cans    | tock Ph               | noto                   |                     |                              |  |
| ITEM REVIEWED                                                                            |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        | 0                                     | oan 5   | IUCK FI               | 1010                   |                     |                              |  |
| STANDARD SPEC                                                                            | N      |        |                                                                                                            |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| ENTRIES TRACED                                                                           | ,      | YES N  | O N/A                                                                                                      | FILE#                                   |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Yield Calculations                                                                       |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Delivery Tickets - Proper Identification, Checked, Accumulation Correct                  |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Street Mix Temperature Documented                                                        |        |        |                                                                                                            |                                         | _         |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Date Bituminous Plant Certified by TMI In on JMF                                         |        |        | Michigan Department CERTIFICATION AND FINAL ESTIMATE REVIEWS                                               |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Mix Design / JMF                                                                         |        |        | 1973 (12/13) CONCRETE ITEMS REVIEW CHECKLIST                                                               |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Regular Test Job? (Local Agencies Only)                                                  |        | 0      | ONTRACT IDE                                                                                                | ENTIFICATION                            |           |                                                                                                                                                                        |                                       |         |                       |                        | _                   |                              |  |
| Moisture & Density - Nuclear Method (Form 0582)                                          |        | -      | EM REVIEWE                                                                                                 | D                                       |           |                                                                                                                                                                        |                                       |         |                       |                        | L                   |                              |  |
| Daily Report of Bituminous Plant Inspection (Form 1903)                                  |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        |                                       |         |                       |                        | L                   |                              |  |
| Marchall HMA Mixture with Sampling Behind the Pave Spec. or QA/QC S                      | peo?   | 8.     | STANDARD SPEC, YEAR                                                                                        |                                         |           |                                                                                                                                                                        | SPECIAL PROVISION                     | (8)     |                       |                        |                     |                              |  |
| Contractor Quality Control Plan                                                          |        |        |                                                                                                            |                                         |           | REM.                                                                                                                                                                   | YES NO                                |         | FILE #                | _                      |                     |                              |  |
| Contractor Quality Control Results (Form 1903C)                                          |        | _      | ENTRIES TRACED                                                                                             |                                         |           |                                                                                                                                                                        | TES                                   | NO      | FILE#                 | _                      |                     |                              |  |
| Report of Verification / Acceptance Testing and Core Density (Form 1903B) 6<br>Originals | Signed | Pr     | Certificate of Conformance for Concrete<br>Production Facilities. Automatic Control<br>Check               |                                         |           | From National Ready Mix Concrete Association (NRMCA) Must verify certification with NRMCA website: My.NRMCA org/scriptcontent/findcertplant/index.cfm                  |                                       |         |                       |                        |                     |                              |  |
| Core Density and Core Compaction (Form 1907)                                             |        |        |                                                                                                            | nin Barata                              |           | org/scriptcontent/find<br>Every 6 months.(Same                                                                                                                         |                                       |         | Michigan              | Department             | FINA                | L ESTI                       |  |
| PWL Speo?                                                                                |        |        | Proportioning Scales Report or<br>Calibration of Platform Scales                                           |                                         |           | Every 6 months.(came                                                                                                                                                   |                                       | Of Tran | sportation<br>(01/12) | DISTRIBUTION: OF       | riginal - Co        |                              |  |
| HMA QC Plan                                                                              |        |        | Weekly Summary of Certified Concrete from<br>Commercial Central Mix and Transit Mix<br>Plants - (Form1155) |                                         |           | Used for numbered plants. (Not required in<br>project files if Certification Statement and<br>Source of materials used in mixture are<br>included on concrete tickets. |                                       |         |                       |                        | (For Local Agency p | opy – Regio<br>projects forw |  |
| HMA QA Plan                                                                              |        |        |                                                                                                            |                                         |           |                                                                                                                                                                        |                                       |         | CONTROL SECTION       |                        | MDOT files)         | RE                           |  |
| Report of Verification / Acceptance Testing and Core Density (Form 1903B) 8<br>Originals |        |        | Inspector's Report of Concrete Placed (Forms<br>1174R and 11749)                                           |                                         |           |                                                                                                                                                                        |                                       |         |                       | JOB NO.<br>CT ENGINEER | HE                  |                              |  |
| Core Density and Core Compaction (Form 1907)                                             |        |        | Report of Modulus of Rupture/Cylinder                                                                      |                                         |           |                                                                                                                                                                        |                                       | CONSTRU | CTION/PROJE           | 21 ENGINEER            |                     |                              |  |
| Contractor Quality Control Results (Form 1903C) (Test Strip Only)                        |        |        | Results                                                                                                    |                                         |           | Check strengths                                                                                                                                                        |                                       | PROJECT | igth, Type).          |                        |                     |                              |  |
| PWL pay Factor Sheet                                                                     |        |        | Delivery Tickets - With Stamp Stating<br>Materials Meet MDOT Specifications                                |                                         |           | Signed, dated, MDOT project identification,<br>batch & discharge times (bridge decks only)                                                                             |                                       |         |                       |                        |                     |                              |  |
| The following Materials are listed on the Material Source List and are approved?         |        | _      |                                                                                                            |                                         |           | By region personnel- 0                                                                                                                                                 |                                       |         |                       |                        |                     |                              |  |
| Asphalt Cement                                                                           |        |        |                                                                                                            | Independent Assurance Tests for Concret |           |                                                                                                                                                                        | IAT database (copy in project file)   |         | -                     |                        | (Team Leader)       |                              |  |
| and coat                                                                                 |        | In     | Independent Assurance Tests for Aggregate                                                                  |                                         |           | Can be documented on IAT database                                                                                                                                      |                                       |         | REVIEW<br>TEAM        |                        | 1.                  |                              |  |
| Documentation on IDR per CA - 2006-07                                                    |        |        | JMF Concrete Field Communication                                                                           |                                         |           | Form 1976                                                                                                                                                              |                                       |         |                       |                        | 2.                  |                              |  |
| Materials Certification Statement From Contractor (12 spec. 501.02 A-1)                  |        | -      | ir condeter                                                                                                | ied Communicati                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| Independent Assurance Tests (NH0 Only)                                                   |        |        | Aggregate Inspection Reports                                                                               |                                         |           | Required if aggregates are not from pre-<br>qualified pits. (Reduced acceptance reports                                                                                |                                       |         | CONTRACT ITEM SAMPLED |                        |                     |                              |  |
| ertified Testers and Samplers                                                            |        |        |                                                                                                            |                                         |           | required in project files for regions without<br>central materials control)                                                                                            |                                       |         |                       |                        |                     |                              |  |
| All Forms Properly Identified, Signed, & Dated                                           |        |        | Core Record for Thickness of Pavement and<br>Deoth of Reinforcement                                        |                                         |           | If applicable                                                                                                                                                          |                                       |         |                       |                        |                     |                              |  |
| COMMENTS                                                                                 |        | T      |                                                                                                            | pth of Reinforceme                      | ent Price | If applicable                                                                                                                                                          |                                       |         |                       |                        |                     |                              |  |
|                                                                                          |        |        | LA abrasion/Freeze Thaw                                                                                    |                                         |           | Required when pit is n                                                                                                                                                 | Required when pit is not prequalified |         |                       |                        |                     |                              |  |
| REVIEWED BY                                                                              |        |        | Qualified Testers                                                                                          |                                         |           | Required on NHS projects                                                                                                                                               |                                       |         |                       |                        |                     |                              |  |
|                                                                                          |        | ٥      | ontractor Qual                                                                                             | ty Control Plan                         |           |                                                                                                                                                                        |                                       |         |                       |                        |                     |                              |  |
| MOOT                                                                                     |        | _      |                                                                                                            |                                         |           | t                                                                                                                                                                      |                                       |         |                       |                        |                     |                              |  |

MDOT **Forms** 1969, 1147, 1970, 1971

| EWS                                                                                                                                                                                                                                                                                                         | N/A           | FILE S                                                                                                                          |                                                                                         | R                 | Can St                                                                      | lock Ph             |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------|---------------------|------------------------------------------|------------------------------------|--------------------------|------------------------------------------------------------------------|-----------|------------|---------------------|-----------------------------------------------------|----------------|--------|---|
| Mic                                                                                                                                                                                                                                                                                                         | thigan Depart |                                                                                                                                 | ICATION AND FI                                                                          | NAL ESTIMATE      | REVIEWS                                                                     | 6                   |                                          |                                    |                          |                                                                        |           |            | \                   |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             | 1973 (12/13   | C                                                                                                                               | ONCRETE ITEMS                                                                           | REVIEW CHECKL     | IST                                                                         |                     |                                          | _                                  |                          |                                                                        |           |            | \                   |                                                     |                |        | V |
|                                                                                                                                                                                                                                                                                                             | REVIEWED      |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          | L                                  |                          |                                                                        |           |            |                     | \                                                   |                |        |   |
| STAN                                                                                                                                                                                                                                                                                                        | DARD SPEC     | . YEAR                                                                                                                          |                                                                                         | SPECIAL PROVISION | (8)                                                                         |                     |                                          | _                                  |                          |                                                                        |           |            |                     | \                                                   |                |        | N |
| ENTRIES TRACED REMARKS                                                                                                                                                                                                                                                                                      |               |                                                                                                                                 | YES                                                                                     | NO                | FILE#                                                                       |                     |                                          |                                    |                          |                                                                        |           | \          |                     |                                                     |                |        |   |
| Certificate of Conformance for Concrete Production Facilities. Automatic Control Check Production Facilities. Automatic Control Check Programman Control Conformance for Concrete Association.(NRIAICA). Must verify certification with NRIMOA website. My NRIMOA org isorphoreners/frience-plant/index.cfm |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           | \          |                     |                                                     | 1 of 2         |        |   |
| Proportioning Scales Report or<br>Calibration of Platform Scales                                                                                                                                                                                                                                            |               | Every 6 months.(Same as above)                                                                                                  |                                                                                         |                   | Michigan Department<br>Of Transportation<br>1147 (01/12)<br>CONTROL SECTION |                     | DISTRIBUTION: Original                   | STIMATE<br>- Construction          | /Project E               | naineer/F                                                              | MMAF      | RY         |                     |                                                     |                | LE 200 |   |
| Weekly Summary of Certified Concrete from<br>Commercial Central Mix and Transit Mix<br>Plants - (Form1155)                                                                                                                                                                                                  |               | Used for numbered plants. (Not required in project files if Certification Statement and Source of materials used in mixture are |                                                                                         |                   |                                                                             |                     | (For Local Agency project<br>MDOT files) | Region Constr<br>ts forward origin | uction Eng<br>nal to man | gineer<br>aging age                                                    | ency. Ret | ain copy f | tor                 | PAGE                                                | OF             | _      |   |
| Inspector's Report of Concrete Placed (Forms                                                                                                                                                                                                                                                                |               | included on concrete                                                                                                            | included on concrete tickets.  Check for times & water added (Per 601.03)               |                   |                                                                             |                     | JOB NO.                                  | REGION                             | FEDER                    | AL PROJ                                                                | ECT NO.   |            | FINAL CONTRACT AMT. |                                                     |                |        |   |
| 1174R and 1174S) Report of Modulus of Rupture/Cylinder                                                                                                                                                                                                                                                      |               |                                                                                                                                 | Check strengths                                                                         |                   | CONSTRUC                                                                    | TION/PROJE          | ECT ENGINEER CONTRACTOR                  |                                    |                          |                                                                        |           |            |                     |                                                     | REVIEW DATE(8) |        |   |
| Results                                                                                                                                                                                                                                                                                                     |               |                                                                                                                                 | d, dated, MDOT project identification,                                                  |                   | PROJECT                                                                     | ESCRIPTION          | (Location, Limits, Length, 1             | (ype)                              |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Materials Meet MDOT Specifications batch & discharge times                                                                                                                                                                                                                                                  |               | nes (bridge decks only)                                                                                                         |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Independent Assurance Tests for Concrete IAT database (copy                                                                                                                                                                                                                                                 |               |                                                                                                                                 |                                                                                         | REVIEW<br>TEAM    |                                                                             | (Team Leader)<br>1. | 3.                                       |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Independent Assurance Tests for Aggregate  JIMF Concrete Field Communication                                                                                                                                                                                                                                |               |                                                                                                                                 | Can be documented on IAT database                                                       |                   |                                                                             | 2.                  |                                          | 4                                  |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 | Required if aggregates are not from pre-<br>qualified pits. (Reduced acceptance reports |                   |                                                                             | CONTR               | RACT ITEM SAMPLED                        | ACT ITEM SAMPLED                   |                          | MEASUREMENT SKINATURE CO<br>PER AND PR<br>SPECIFICATION IDENTIFICATION |           |            | COMP<br>PRESS       | MPLETE & PROPER ESCRIBED TESTING AND FORM PROCEDURE |                |        |   |
| Aggregate Inspection Reports                                                                                                                                                                                                                                                                                |               |                                                                                                                                 | required in project files for regions without<br>central materials control)             |                   |                                                                             |                     |                                          |                                    | YES                      | NO                                                                     | YES       | NO         | YES                 |                                                     | YES            | NO     |   |
| Core Record for Thickness of Pavement and<br>Depth of Reinforcement                                                                                                                                                                                                                                         |               |                                                                                                                                 | If applicable                                                                           |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Thickness & Depth of Reinforcement Price<br>Adjustment                                                                                                                                                                                                                                                      |               |                                                                                                                                 | If applicable                                                                           |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| LA abrasion/Freeze Thaw                                                                                                                                                                                                                                                                                     |               | Required when pit is r                                                                                                          | Required when pit is not prequalified                                                   |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                | _      |   |
| Qualified Testers Required                                                                                                                                                                                                                                                                                  |               | Required on NHS pro                                                                                                             | Required on NHS projects                                                                |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Contractor Quality Control Plan                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Quality Control Test Reports                                                                                                                                                                                                                                                                                |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Alkali - Silica Reactivity                                                                                                                                                                                                                                                                                  |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Lane Ties Pull Out Tests (per Table 602.1)                                                                                                                                                                                                                                                                  |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     | _              |        |   |
| Sidewalk Ramps Conform to Standard Details                                                                                                                                                                                                                                                                  |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| Comn                                                                                                                                                                                                                                                                                                        | ments/Conclu  | sions                                                                                                                           |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
| REVIEWED BY                                                                                                                                                                                                                                                                                                 |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |
|                                                                                                                                                                                                                                                                                                             |               |                                                                                                                                 |                                                                                         |                   |                                                                             |                     |                                          |                                    |                          |                                                                        |           |            |                     |                                                     |                |        |   |

#### Common File Review/Deficiencies

- Incomplete/Missing Material Source List
- Missing:
  - Material Associations/Cross-Referencing in FM
  - Yield/Temp checks on HMA
  - Concrete ticket certification statement/signatures
  - Concrete QA/QC plans and/or test results
  - Material Source notation on IDR
  - "VI & VI Accepted" notations on IDR's
  - Density tests for material placed
- Items paid for without having:
  - Material General Certifications
  - Material Test Data



# MDOT & Local Agency Common Goals

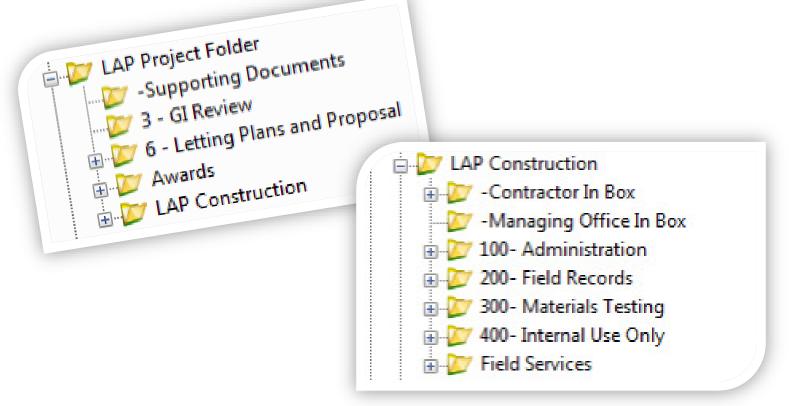
Aid Preservation/Program Compliance



Successful Transportation Projects

Positive Public Perception

#### e-construction Standard ProjectWise Template



MDOT Construction Wiki has index for filing

https://mdotwiki.state.mi.us/construction/index.php/Main\_Page



#### Beyond e-construction

- ► GI submittals transitioning to electronic
- ► Adobe to Co-Sign transition for e-signatures



► LCP Tracker (available w/TSC support - add via CM) - 12SP-104F-01



#### Software Login

http://LCPtracker.net

#### Public Site

http://lcptracker.com



#### MDOT Spec Book

2020 Release anticipated
Electronic and hard copy being discussed
Opportunity for LA's to participate via CRA/MML

### Wiki CONSTRUCTION MANUAL



#### **Bureau of Field Services**

**Construction Field Services Division** 

BOHIM's phased out
Construction Advisories getting phased out
Enhancing search functions

### Industry News



Crystalline Silica Dust - MIOSHA-STD-1503 (02/17)

- Bridge High Strength Bolts
  - ASTM A325 High Strength Bolts now ASTM F3125 Grade A325
- Asbestos Testing/Bridges



www.michigan.gov/mdotlap

Plan submittal thru bidding

www.michigan.gov/mdotlocalconstruction

Construction thru close-out





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