Volumetric Inspection Checklist

Date ________ Time ________

Producer ______________________ Truck # ______________________ Region ________

Mixer Operator ______________________ Manager ______________________

Central Facility Address ______________________

Phone/Email ______________________

Regional M&T Inspector ______________________ HQ M&T Inspector ______________________

<table>
<thead>
<tr>
<th>Prior to Inspection</th>
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<tbody>
<tr>
<td>1. Are there deficiencies noted on the last Regional Inspection Report? Yes □ No □</td>
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<tr>
<td>2. Are there deficiencies noted on the last HQ Audit? Yes □ No □</td>
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<tr>
<td>3. Does the mobile mixer have an approved mix design? Yes □ No □</td>
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<tr>
<td>4. Have they poured approved mix on a project? (What was last design we had breaks for? Look at break reports. Are there 28 day breaks?) Yes □ No □</td>
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Comments: _________________________________________________________________________

________________________________________________________________________

<table>
<thead>
<tr>
<th>Paperwork in Mobile Mixer</th>
</tr>
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<tbody>
<tr>
<td>1. Annual Volumetric Mobile Mixer Process Control Plan Yes □ No □</td>
</tr>
<tr>
<td>2. Current Certified Technician Form Yes □ No □</td>
</tr>
<tr>
<td>3. Approved Mix Designs Yes □ No □</td>
</tr>
<tr>
<td>4. Previous Volumetric Inspection Checklist Yes □ No □</td>
</tr>
<tr>
<td>5. Current Materials List Yes □ No □</td>
</tr>
<tr>
<td>6. Records of delivery tickets of all materials such as coarse and fine aggregates, cement, fly-ash and all other admixtures and additives used for state projects Yes □ No □</td>
</tr>
<tr>
<td>7. Record of all tests and inspections performed at the plant by QC personnel? Yes □ No □</td>
</tr>
<tr>
<td>8. Calibration procedure available? Yes □ No □</td>
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Comments: _________________________________________________________________________

________________________________________________________________________
### Materials (SOP 4-5, SOP 4-4, 901.01)

1. Does mobile mixer use municipal or non-municipal water? Municipal □ Non-municipal □
2. If non-municipal water, are test records available? Yes □ No □
3. Check materials in mobile mixer against approved mix design (ask mixer operator for supplier info):
   - Cement
   - Chemical Admixtures
   - Fine Aggregate
   - Coarse Aggregate
   - Surface Aggregate
4. Check materials at central facility against approved mix design (ask producer for supplier info):
   - Cement
   - Chemical Admixtures
   - Fine Aggregate
   - Coarse Aggregate
   - Surface Aggregate

Comments: _______________________________________________________________________
_________________________________________________________________________

### Quality Control

1. How are aggregate stockpiles being kept cool on hot days and warm on cold days?
   - Cooling method: ____________________ Heating method: ____________________
2. Is there a qualified technician doing the QC testing as concrete is being batched? Yes □ No □
3. Are gradations on aggregate being run according to Process Control Plan? Yes □ No □
4. Are aggregate moistures being performed according to Process Control Plan? Yes □ No □

Comments: _______________________________________________________________________
_________________________________________________________________________

### If Concrete is Being Mixed for a TDOT Project

1. Is adverse weather affecting the pour? Yes □ No □
2. Are temperature limitations being followed? Yes □ No □
3. Are admixtures being added in accordance with manufacturer’s recommendations? Yes □ No □

Comments: _______________________________________________________________________
_________________________________________________________________________
Project Specific Checks

1. Are calculated corrections recorded for adjustments made when water is withheld or added on the delivery ticket? (ice should also be shown in adjustments) ...........................................Yes □ No □

2. Look at Batch Tickets and Delivery Tickets (501.03.B.12) and pick a random sample:
   a. Date ________________________________
   b. Contract Number ____________________________
   c. County ________________________________
   d. Class of Concrete ___________________________
   e. Concrete Design Number _________________________
   f. Number of Cubic Yards __________________________ c.y.
   g. Load Number _______________________________
   h. Truck Number _____________________________
   i. Maximum water allowed by design __________________________ gal
   j. Actual Water Added at Plant __________________________ gal
   k. Maximum additional water allowed on project __________________________ gal
   l. Actual Water Added on Project – Is there a space for this? Yes □ No □
   m. Number of Revolutions at Mixing Speed at Plant (70-100) ___________
   n. Time Loaded _________________________________ a.m. / p.m.
   o. Time Discharged – Is there a space for this on ticket? Yes □ No □
   p. Actual and target batch weights of each component recorded? (including each aggregate, chem. admixture and mineral admixture used) ___________________________ Yes □ No □
   q. VMMB Volumetric Mixer Operator Signature ____________________________ Yes □ No □

3. Contractor Daily Reports
   a. Date ________________________________
   b. Contract and Project __________________________
   c. Batch Weights ___________________________
   d. Moisture Corrections ___________________________
   e. Admixtures ______________________________
   f. Gradations ______________________________
   Ask if the following are written on the report.
   g. Slump __________________________________
   h. Air Content ______________________________
   i. Temperature ______________________________

4. Are the initial slump, air and temperature tests being performed for a particular pour and being recorded and readily available? ___________________________ Yes □ No □

5. When Self-Consolidating Concrete (SCC) is being batched, are the slump flow, visual stability index (VSI), T50, and passing ability falling within the specifications? ___________ Yes □ No □ N/A □

Comments: __________________________________________________________________________
_________________________________________________________________________
Central Facility (SOP 4-5, SOP 1-4, & 106.07)

1. Stockpile maintenance
   a. Labeled ................................................................. Yes □ No □
   b. Overflowing ............................................................. Yes □ No □
   c. Partitions ................................................................. Yes □ No □
   d. Segregated ................................................................. Yes □ No □

2. All lab equipment easily fits in space and is accessible .............................................. Yes □ No □
   Scoop ................................................................. □
   6"x12"/4"x8" cylinder molds .................. □
   Sample reduction equipment .... □
   Square blade shovel .................. □
   Slump cone with base ........ □
   Pan ................................................................. □
   Tamping rod .................. □
   Thermometers .................. □
   Air meter with case ........ □
   Wheelbarrow .............. □

3. Space is floored, roofed, sealed inside, weather-tight, and furnished with electricity ...... Yes □ No □

4. Laboratory equipped with heat source capable of maintaining a temperature of 230°F +/- 9°F? ........................................
   a. Oven ................................................................. □
   b. Stovetop .......................................................... □
   c. Hot Plate .......................................................... □

5. Appropriate lights, electrical outlets, and HVAC is provided for tests being performed , Yes □ No □

6. Scales (2 kg capacity, 0.2% sensitivity, 0.5% accuracy) available ............................................ Yes □ No □

7. Scales (100 lbs capacity, 0.2% sensitivity, 0.5% accuracy) available ............................................ Yes □ No □

8. Appropriate size and mesh screens are available to perform gradations .......................... Yes □ No □

<table>
<thead>
<tr>
<th>Coarse Series</th>
<th>Fine Series</th>
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<tbody>
<tr>
<td>2&quot; □</td>
<td>3/8&quot; □</td>
</tr>
<tr>
<td>1 ½&quot; □</td>
<td>#4 □</td>
</tr>
<tr>
<td>1&quot; □</td>
<td>#8 □</td>
</tr>
<tr>
<td>¾&quot; □</td>
<td>#16 □</td>
</tr>
<tr>
<td>½&quot; □</td>
<td>#30 □</td>
</tr>
<tr>
<td>3/8&quot; □</td>
<td>#50 □</td>
</tr>
<tr>
<td>#4 □</td>
<td>#100 □</td>
</tr>
<tr>
<td>#8 □</td>
<td>#200 □</td>
</tr>
<tr>
<td>Tray □</td>
<td>Pan □</td>
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</table>

9. Mechanical shaker (Coarse Aggregate) ................................................................. Yes □ No □

10. Mechanical shaker (Fine Aggregate) ................................................................. Yes □ No □

11. Adequate and suitable water supply is available to perform wash tests in
    accordance with AASHTO T 11, if necessary ...................................................... Yes □ No □

Comments:  _________________________________________________________________________
_________________________________________________________________________
Mobile Unit (SOP 4-5, 604.04.B)

1. Does the mobile unit have calibrated proportioning devices for each ingredient? □ Yes □ No

2. Does the mobile unit mix concrete with a continuous auger and/or paddle? □ Yes □ No

3. Is the mobile unit equipped with proportioning controls that may be set for different materials and mixes? □ Yes □ No

4. Does the mobile unit have separate bins and gate openings for each type of material? □ Yes □ No

5. Does the mobile unit have watertight storage for cementitious material? □ Yes □ No

6. Does the mobile unit's aggregate bins have a cover (i.e. tarp or other approved method)? □ Yes □ No

7. Does the mobile unit have a stamped plate from VMMB stating equipment conforms to ASTM C685? □ Yes □ No
   a. Gross volume of unit
   b. Discharge speed
   c. Mass calibrated constant of the machine

8. Are calibrations being performed at a minimum of every 6 months, every 2500 cy, or for a new mix design? □ Yes □ No

9. Is the yield maintained within a ±1% tolerance? □ Yes □ No

10. Is yield verified using a minimum 2 cf container at a minimum of every 500 cy or once/week? □ Yes □ No

11. Mobile Mixer Operator Name: ________________________
    a. TDOT/ACI Level 1 Expiration Date: _______________
    b. TDOT Level 2 Expiration Date: _______________
    c. VMMB Volumetric Mixer Operator Expiration Date: _______________

12. Calibration Technician Name: ________________________
    a. TDOT/ACI Level 1 Expiration Date: _______________
    b. TDOT Level 2 Expiration Date: _______________
    c. TDOT Level 3 Expiration Date: _______________
    d. VMMB Volumetric Mixer Operator Expiration Date: _______________

Comments: _________________________________________________________________________
_________________________________________________________________________
Date __________ Time ______

Producer __________________ Location ______________________ Region ______

Plant Representative __________________ Plant Manager ______________________

Plant Address ____________________________________________________________

Phone/Email __________________________________________________________________

Regional M&T Inspector ________________ HQ M&T Inspector ______________________

**Discussion of Findings**

Discuss summary of findings with plant representative.

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TDOT Auditor Signature _______________________________________________________

Plant Representative Signature ____________________________________________