## PROFICIENCY CHECKLIST

**Applicant**

**Employer**

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| 1. **Explain:** Is the machine certified by MoDOT?  
   Setup with values on calibration certificate?  
   Is the driver IRI certified? |   |   |
| 2. **Explain:** Items that should be checked prior to profiling.  
   - Vehicle fluid levels |   |   |
   - Headlights, signals, **safety strobes/beacons, signage** |   |   |
   - Profile path project readiness – dry run |   |   |
   - Warm up  
     - Engine |   |   |
     - Transmission |   |   |
     - Tires |   |   |
   - Tire pressure |   |   |
   - Visually check sensors |   |   |
   - Static sensor check |   |   |
| 3. **Explain:** Distance Measurement Instrument (DMI) verification procedure  
   (Actual DMI testing will be completed at the Airport in Linn) |   |   |

- Clean, dry, (damp ok) testing track.
- Warm up host vehicle tires and operating system
- Turn off filters
- Set-up the computer for profiling the testing track
- Line up with the cone, ready the trigger device
- Navigate the inertial profiler over a measured test section of 528 ft. ± 0.1 ft.
- Maintain the vehicle at a constant speed through out the test.
- Save the profile in a file, transfer to a thumb drive, hand over to the Engineer to analyze
- Is the result within 0.15% of the measured length?
- If profiler does not meet the 0.15%, make adjustments and repeat the run.

**NOTE:** GPS-DMI must pass within 0.15% of the measured length.
4. **Demonstrate: Laser Height verification procedure**
   **Block Test:**
   - Placed a smooth base plate under the height sensors. Allow the system to measure this height. Zero out the sensors.
   - Centered a 0.25-inch block under the height sensors on top of the base plate and recorded height measurement.
   - Replaced the 0.25-inch block with the 0.50-inch block. Record height measurement.
   - Replaced 0.50-inch block with the 1.00-inch block. Recorded height measurement.
   - Replaced 1.00-inch block with the 2.00-inch block. Recorded height measurement.
   - Gauge block height measurement recorded in the calibration log.
   - For each gauge block, the absolute difference between the height measurement and the actual gauge block thickness is less than or equal to 0.01 inch.

5. **Demonstrate: Bounce Test**
   - Vehicle parked on a level surface?
   - Performed after operating system has reached operational stability according to manufacture?
   - With the base plates in position simultaneously under both wheel path sensors, place the vehicle in an operating mode that simulates longitudinal movement and initiate profile data collection. (vehicle is in park)
   - Subjected the vehicle to a vertical displacement of approximately 1 to 2 in. for the time required to travel 528 ft.
   - Measured profiles saved and analyzed in ProVAL.
   - System showed a passing result?

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Examiner: ___________________________ Date: ___________________________