

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID [P15]
*STATE CODE [53]
*SHRP SECTION ID [3013/1008 NB drive]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [06 /14 /2006]
2. * TYPE OF EQUIPMENT CALIBRATED ☒ WIM ☐ CLASSIFIER ☐ BOTH
3. * REASON FOR CALIBRATION
☒ REGULARLY SCHEDULED SITE VISIT ☐ RESEARCH
☐ EQUIPMENT REPLACEMENT ☐ TRAINING
☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☐ OTHER (SPECIFY) _____
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
☐ BARE ROUND PIEZO CERAMIC ☒ BARE FLAT PIEZO ☐ BENDING PLATES
☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☐ QUARTZ PIEZO
☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS
☒ NUMBER OF TRUCKS COMPARED ☐ 1 ☐ NUMBER OF TEST TRUCKS USED

TYPE PER FHWA 13 BIN SYSTEM
SUSPENSION: 1 - AIR; 2 - LEAF SPRING
3 - OTHER (DESCRIBE)

TRUCK	TYPE	PASSES PER TRUCK	SUSPENSION
1	Class 9		Air
2			
3			

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
DYNAMIC AND STATIC GVW 3.48% STANDARD DEVIATION 2.22%
DYNAMIC AND STATIC SINGLE AXLES -6.34% STANDARD DEVIATION 4.30%
DYNAMIC AND STATIC DOUBLE AXLES 5.24% STANDARD DEVIATION 2.19%
8. ☐ 1 ☐ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) ☐ 57 mph
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .196, Sensor #2= .189
11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
3 ranges are used. Range #1 is set at 8,000 pounds front axle for trucks weigh up to 32,000 pounds. Range #2 is set for 10,000 pounds front axle for trucks weigh between 32,001 to 50,000 pounds. Range #3 is set for 11,000 pounds front axle for trucks weigh greater than 50,000 pounds.

CLASSIFIER TEST SPECIFICS***

12. *** METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:
☐ VIDEO ☐ MANUAL ☐ PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT ☐ TIME ☐ NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
*** FHWA CLASS 9 ☐ FHWA CLASS ☐
*** FHWA CLASS 8 ☐ FHWA CLASS ☐
FHWA CLASS ☐
FHWA CLASS ☐
*** PERCENT "UNCLASSIFIED" VEHICLES: ☐ . ☐

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☐ EQUIPMENT REPLACEMENT ☐ TRAINING
☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☐ OTHER (SPECIFY) _____

4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
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☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☐ QUARTZ PIEZO
☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY) _____

5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS

☐ NUMBER OF TRUCKS COMPARED ☐ NUMBER OF TEST TRUCKS USED

	PASSES PER TRUCK		
	TRUCK	TYPE	SUSPENSION
TYPE PER FHWA 13 BIN SYSTEM	1	Class 9	<input checked="" type="checkbox"/> Air
SUSPENSION: 1 - AIR; 2 - LEAF SPRING	2		
3 - OTHER (DESCRIBE)	3		

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
DYNAMIC AND STATIC GVW 2.52% STANDARD DEVIATION 1.06%
DYNAMIC AND STATIC SINGLE AXLES 0.63% STANDARD DEVIATION 2.08%
DYNAMIC AND STATIC DOUBLE AXLES 2.82% STANDARD DEVIATION 1.10%

8. ☐ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED

9. DEFINE THE SPEED RANGES USED (MPH) ☐ 57 mph _____

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .176, Sensor #2= .155

11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
3 ranges are used. Range #1 is set at 8,000 pounds front axle for trucks weigh up to 32,000 pounds. Range #2 is set for 10,000 pounds front axle for trucks weigh between 32,001 to 50,000 pounds. Range #3 is set for 11,000 pounds front axle for trucks weigh greater than 50,000 pounds.

CLASSIFIER TEST SPECIFICS***

12.*** METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:
☐ VIDEO ☐ MANUAL ☐ PARALLEL CLASSIFIERS

13. METHOD TO DETERMINE LENGTH OF COUNT ☐ TIME ☐ NUMBER OF TRUCKS

14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
*** FHWA CLASS 9 _____ FHWA CLASS _____
*** FHWA CLASS 8 _____ FHWA CLASS _____
FHWA CLASS _____
FHWA CLASS _____
*** PERCENT "UNCLASSIFIED" VEHICLES: _____ . _____

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☐ DATA TRIGGERED SYSTEM REVISION ☐ NEW EQUIPMENT INSTALLATION
☐ OTHER (SPECIFY) _____

4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
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☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☐ QUARTZ PIEZO
☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY) _____

5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS

☐ NUMBER OF TRUCKS COMPARED ☐ NUMBER OF TEST TRUCKS USED

		PASSES PER TRUCK	
	TRUCK	TYPE	SUSPENSION
TYPE PER FHWA 13 BIN SYSTEM SUSPENSION: 1 - AIR; 2 - LEAF SPRING 3 - OTHER (DESCRIBE)	1	Class 9	Air
	2		
	3		

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---

DYNAMIC AND STATIC GVW	2.97%	STANDARD DEVIATION	2.46%
DYNAMIC AND STATIC SINGLE AXLES	-2.68%	STANDARD DEVIATION	2.93%
DYNAMIC AND STATIC DOUBLE AXLES	4.45%	STANDARD DEVIATION	3.01%

8. ☐ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED

9. DEFINE THE SPEED RANGES USED (MPH) ☐ 57 mph _____

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .154, Sensor #2= .159

11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☒ Yes
IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: Site is set to auto-calibrate every week.
3 ranges are used. Range #1 is set at 8,000 pounds front axle for trucks weigh up to 32,000 pounds. Range #2 is set for 10,000 pounds front axle for trucks weigh between 32,001 to 50,000 pounds. Range #3 is set for 11,000 pounds front axle for trucks weigh greater than 50,000 pounds.

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13. METHOD TO DETERMINE LENGTH OF COUNT ☐ TIME ☐ NUMBER OF TRUCKS

14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
*** FHWA CLASS 9 _____ FHWA CLASS _____
*** FHWA CLASS 8 _____ FHWA CLASS _____
FHWA CLASS _____
FHWA CLASS _____
*** PERCENT "UNCLASSIFIED" VEHICLES: _____ . _____

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☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS
☐ OTHER (SPECIFY)

5. EQUIPMENT MANUFACTURER: INTERNATIONAL ROAD DYNAMIC

WIM SYSTEM CALIBRATION SPECIFICS**

6. ** CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS

☐ NUMBER OF TRUCKS COMPARED ☐ NUMBER OF TEST TRUCKS USED

PASSES PER TRUCK
TRUCK TYPE SUSPENSION
TYPE PER FHWA 13 BIN SYSTEM 1 Class 9 Air
SUSPENSION: 1 - AIR; 2 - LEAF SPRING 2
3 - OTHER (DESCRIBE) 3

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
MEAN DIFFERENCE BETWEEN ---
DYNAMIC AND STATIC GVW 0.99% STANDARD DEVIATION 2.10%
DYNAMIC AND STATIC SINGLE AXLES -8.48% STANDARD DEVIATION 3.63%
DYNAMIC AND STATIC DOUBLE AXLES 2.58% STANDARD DEVIATION 2.26%

8. ☐ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED

9. DEFINE THE SPEED RANGES USED (MPH) 57 mph

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) Sensor #1= .154, Sensor #2= .159

11. ** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) Yes
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*** FHWA CLASS 9 FHWA CLASS
*** FHWA CLASS 8 FHWA CLASS
FHWA CLASS
FHWA CLASS
*** PERCENT "UNCLASSIFIED" VEHICLES: