

JUL-16-2003 10:12

FRUGRE BRE

SHEET 16  
MONITORED TRAFFIC DATA  
LTPP PROGRAM

\*STATE ASSIGNED ID  
\*STATE CODE  
\*SHRP SECTION ID

[9935]  
[12]  
[0100]

## SITE CALIBRATION INFORMATION

1. \* DATE OF CALIBRATION (MONTH/DAY/YEAR) [07/09/2003]
2. \* TYPE OF EQUIPMENT CALIBRATED WIM CLASSIFIER BOTH
3. \* REASON FOR CALIBRATION  
☐ REGULARLY SCHEDULED SITE VISIT  
☐ EQUIPMENT REPLACEMENT  
☐ DATA TRIGGERED SYSTEM REVIEW  
☒ OTHER (SPECIFY) New sensors - Quartz Piezo installed
4. \* SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):  
☐ BARE ROUND PIEZO ☐ BARE FLAT PIEZO ☐ BENDING PLATES  
☐ CHANNELIZED ROUND PIEZO ☐ LOAD CELLS ☒ QUARTZ PIEZO  
☐ CHANNELIZED FLAT PIEZO ☒ INDUCTANCE LOOPS ☐ CAPACITANCE PADS  
☐ OTHER (SPECIFY) \_\_\_\_\_
5. EQUIPMENT MANUFACTURER PAT America, Inc.

## WIM SYSTEM CALIBRATION SPECIFICS\*\*

- 6.\*\* CALIBRATION TECHNIQUE USED:  
☐ TRAFFIC STREAM ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS  
☐ NUMBER OF TRUCKS COMPARED 001 NUMBER OF TEST TRUCKS USED  
021 PASSES PER TRUCK  
 TRUCK TYPE SUSPENSION  
 TYPE PER FHWA 13 BIN SYSTEM  
 SUSPENSION: 1 - AIR; 2 - LEAF SPRING  
 3 - OTHER (DESCRIBE)
- | TRUCK | TYPE    | SUSPENSION |
|-------|---------|------------|
| 1     | Class 9 | Air        |
| 2     |         |            |
| 3     |         |            |

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)  
 MEAN DIFFERENCE BETWEEN —  
 DYNAMIC VS. STATIC GVW 1.6 STANDARD DEVIATION 3.9  
 DYNAMIC VS. STATIC SINGLE AXLES -2.9 STANDARD DEVIATION 2.9  
 DYNAMIC VS. STATIC DOUBLE AXLES 2.2 STANDARD DEVIATION 4.1
8. 07 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) Three speed points at 45mph, 60mph, 75mph
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 970.0
- 11.\*\* IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) No  
 IF YES, IDENTIFY AND DEFINE AUTO-CALIBRATION VALUE: \_\_\_\_\_

## CLASSIFIER TEST SPECIFICS\*\*\*

- 12.\*\*\* METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:  
☐ VIDEO (1) ☐ MANUAL (2) ☐ PARALLEL CLASSIFIERS (3)
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: \_\_\_\_\_

PERSON LEADING CALIBRATION EFFORT: Kip Jones  
 CONTACT INFORMATION: \_\_\_\_\_

rev. November 9, 1999

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<b>SHEET 16</b> <b>LTPP MONITORED TRAFFIC DATA</b> <b>SITE CALIBRATION SUMMARY</b>	*STATE ASSIGNED ID [9_9_3_5] *STATE CODE [1_2] *SHRP SECTION ID [0_1_0_0]
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SITE CALIBRATION INFORMATION

1. \* DATE OF CALIBRATION (MONTH/DAY/YEAR) [1\_2/\_0\_3/\_2\_0\_0\_3]
2. \* TYPE OF EQUIPMENT CALIBRATED \_\_\_ WIM \_\_\_ XX CLASSIFIER \_\_\_ BOTH
3. \* REASON FOR CALIBRATION  
 \_\_\_ REGULARLY SCHEDULED SITE VISIT \_\_\_ RESEARCH  
 \_\_\_ EQUIPMENT REPLACEMENT \_\_\_ TRAINING  
 \_\_\_ DATA TRIGGERED SYSTEM REVISION \_\_\_ NEW EQUIPMENT INSTALLATION  
 \_\_\_ XX OTHER (SPECIFY) \_\_\_\_\_ SITE ASSESSMENT \_\_\_\_\_
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  
 \_\_\_ XX OTHER (SPECIFY) \_\_\_\_\_ Quartz Sensor - Loop - Quartz Sensor \_\_\_\_\_
5. EQUIPMENT MANUFACTURER \_\_\_\_\_ PAT DAW 190 \_\_\_\_\_

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
1	_____	_____
2	_____	_____
3	_____	_____

 TYPE PER FHWA 13 BIN SYSTEM  
 SUSPENSION: 1 - AIR; 2 - LEAF SPRING  
 3 - OTHER (DESCRIBE) \_\_\_\_\_
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)  
 MEAN DIFFERENCE BETWEEN ---  
 DYNAMIC AND STATIC GVW \_\_\_\_\_ STANDARD DEVIATION \_\_\_\_\_  
 DYNAMIC AND STATIC SINGLE AXLES \_\_\_\_\_ STANDARD DEVIATION \_\_\_\_\_  
 DYNAMIC AND STATIC DOUBLE AXLES \_\_\_\_\_ STANDARD DEVIATION \_\_\_\_\_
8. \_\_\_\_\_ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) \_\_\_\_\_
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) \_\_\_\_\_
- 11.\*\* IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) \_\_\_\_\_  
 IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CLASSIFIER TEST SPECIFICS\*\*\*

- 12.\*\*\* METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:  
 \_\_\_ VIDEO \_\_\_ XX MANUAL \_\_\_ PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT \_\_\_ TIME \_\_\_ XX NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:  
 \*\*\* FHWA CLASS 9 \_\_\_ 1 \_\_\_ FHWA CLASS 5 \_\_\_ 25 \_\_\_  
 \*\*\* FHWA CLASS 8 \_\_\_ 0 \_\_\_ FHWA CLASS \_\_\_  
 FHWA CLASS \_\_\_  
 FHWA CLASS \_\_\_  
 \*\*\* PERCENT "UNCLASSIFIED" VEHICLES: \_\_\_ 1 \_\_\_

PERSON LEADING CALIBRATION EFFORT: _____ Dean J. Wolf CONTACT INFORMATION: _____ 301-210-5105 _____ rev. November 9, 1999
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<p align="center"><b>SHEET 16</b> <b>LTPP MONITORED TRAFFIC DATA</b> <b>SITE CALIBRATION SUMMARY</b></p>	*STATE ASSIGNED ID [ 9 _ 9 _ 3 _ 5 ]
	*STATE CODE [ _ 1 _ 2 ]
	*SHRP SECTION ID [ _ 0 _ 1 _ 0 _ 0 ]

SITE CALIBRATION INFORMATION

- \* DATE OF CALIBRATION (MONTH/DAY/YEAR) [ 1 \_ 2 / 1 \_ 6 / 2 \_ 0 \_ 0 \_ 3 ]
- \* TYPE OF EQUIPMENT CALIBRATED \_\_ WIM \_\_ CLASSIFIER \_\_ XX \_\_ BOTH
- \* REASON FOR CALIBRATION  
 \_\_ REGULARLY SCHEDULED SITE VISIT  
 \_\_ EQUIPMENT REPLACEMENT  
 \_\_ DATA TRIGGERED SYSTEM REVISION  
 \_\_ XX \_\_ OTHER (SPECIFY) \_\_\_\_\_ SITE EVALUATION  
 \_\_ RESEARCH  
 \_\_ TRAINING  
 \_\_ NEW EQUIPMENT INSTALLATION
- \* SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):  
 \_\_ BARE ROUND PIEZO CERAMIC  
 \_\_ CHANNELIZED ROUND PIEZO  
 \_\_ CHANNELIZED FLAT PIEZO  
 \_\_ OTHER (SPECIFY) \_\_\_\_\_  
 \_\_ BARE FLAT PIEZO  
 \_\_ LOAD CELLS  
 \_\_ XX \_\_ INDUCTANCE LOOPS  
 \_\_ BENDING PLATES  
 \_\_ XX \_\_ QUARTZ PIEZO  
 \_\_ CAPACITANCE PADS
- EQUIPMENT MANUFACTURER \_\_\_\_\_ PAT DAW 190 \_\_\_\_\_

WIM SYSTEM CALIBRATION SPECIFICS\*\*

- \*\*CALIBRATION TECHNIQUE USED:  
 \_\_ TRAFFIC-STREAM \_\_ STATIC SCALE (Y/N) \_\_ XX \_\_ TEST TRUCKS 2  
5 new  
4/23/09 2 NUMBER OF TRUCKS COMPARED 2 NUMBER OF TEST TRUCKS USED  
 TYPE PER FHWA 13 BIN SYSTEM  
 SUSPENSION: 1 - AIR; 2 - LEAF SPRING  
 3 - OTHER (DESCRIBE)  

TRUCK	PASSES PER TRUCK	TYPE	SUSPENSION
1	Class 9	1	
2	Class 9	1	
3			
- SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)  
 MEAN DIFFERENCE BETWEEN \_\_  
 DYNAMIC AND STATIC GVW \_\_ -15.0% \_\_ STANDARD DEVIATION 9.0%  
 DYNAMIC AND STATIC SINGLE AXLES \_\_ -9.3% \_\_ STANDARD DEVIATION 9.0%  
 DYNAMIC AND STATIC DOUBLE AXLES \_\_ -17.8% \_\_ STANDARD DEVIATION 11.7%
- 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
- DEFINE THE SPEED RANGES USED (MPH) \_\_\_\_\_ 45-50, 51-56.9, 57-66 mph \_\_\_\_\_
- CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 1080(75mph), 1030(60mph), 1030(45mph) \_\_\_\_\_
- \*\* IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) N  
 IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CLASSIFIER TEST SPECIFICS\*\*\*

- \*\*\* METHOD FOR COLLECTING INDEPENDENT VOLUME MEASUREMENT BY VEHICLE CLASS:  
 \_\_ XX \_\_ VIDEO \_\_ - MANUAL \_\_ PARALLEL CLASSIFIERS
- METHOD TO DETERMINE LENGTH OF COUNT \_\_ TIME {00 XX NUMBER OF TRUCKS
- MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:  
 \*\*\* FHWA CLASS 9 \_\_ -10 \_\_ FHWA CLASS 5 \_\_ - 25 \_\_  
 \*\*\* FHWA CLASS 8 \_\_ -3 \_\_ FHWA CLASS \_\_  
 FHWA CLASS \_\_  
 FHWA CLASS \_\_  
 \*\*\* PERCENT "UNCLASSIFIED" VEHICLES: 2

PERSON LEADING CALIBRATION EFFORT: Dean J. Wolf  
 CONTACT INFORMATION: 301-210-5105 rev. November 9, 1999

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<b>SHEET 16</b> <b>LTPP MONITORED TRAFFIC DATA</b> <b>SITE CALIBRATION SUMMARY</b>	*STATE ASSIGNED ID [9_9_3_5] *STATE CODE [1_2] *SHRP SECTION ID [0_1_0_0]
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SITE CALIBRATION INFORMATION

1. \* DATE OF CALIBRATION (MONTH/DAY/YEAR) [1\_2/\_1\_7/\_2\_0\_0\_3]
2. \* TYPE OF EQUIPMENT CALIBRATED XX WIM      CLASSIFIER      BOTH
3. \* REASON FOR CALIBRATION  
     REGULARLY SCHEDULED SITE VISIT      RESEARCH  
     EQUIPMENT REPLACEMENT      TRAINING  
     DATA TRIGGERED SYSTEM REVISION      NEW EQUIPMENT INSTALLATION  
XX OTHER (SPECIFY)      SITE EVALUATION
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 XX QUARTZ PIEZO  
     CHANNELIZED FLAT PIEZO XX INDUCTANCE LOOPS      CAPACITANCE PADS  
     OTHER (SPECIFY)
5. EQUIPMENT MANUFACTURER      PAT DAW 190

WIM SYSTEM CALIBRATION SPECIFICS\*\*

- 6.\*\* CALIBRATION TECHNIQUE USED:  
     TRAFFIC STREAM --      STATIC SCALE (Y/N) XX TEST TRUCKS  
2 NUMBER OF TRUCKS COMPARED 2 NUMBER OF TEST TRUCKS USED  
20 PASSES PER TRUCK  

TRUCK	TYPE	SUSPENSION
1	Class 9	1
2	Class 9	1
3		

TYPE PER FHWA 13 BIN SYSTEM  
 SUSPENSION: 1 - AIR; 2 - LEAF SPRING  
 3 - OTHER (DESCRIBE)
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)  
 MEAN DIFFERENCE BETWEEN ---  
 DYNAMIC AND STATIC GVW 1.0% STANDARD DEVIATION 7.2%  
 DYNAMIC AND STATIC SINGLE AXLES 3.5% STANDARD DEVIATION 12.65%  
 DYNAMIC AND STATIC DOUBLE AXLES -2.1% STANDARD DEVIATION 10.7%
8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 45-50, 51-56.9, 57-66 mph
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 1135(75mph), 1200(60mph), 1275(45mph)
- 11.\*\* IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) N  
 IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE:

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 100 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:

PERSON LEADING CALIBRATION EFFORT: <u>Dean J. Wolf</u> CONTACT INFORMATION: <u>301-210-5105</u> rev. November 9, 1999
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