

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID []
*STATE CODE [51]
*SHRP SECTION ID [0100]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [02 / 01 / 2007]
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) ☐ LTPP Validation _____
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 _____ IRD/PAT Traffic _____

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM ☐ STATIC SCALE (Y/N) ☒ TEST TRUCKS
☐ NUMBER OF TRUCKS COMPARED ☐ 2 NUMBER OF TEST TRUCKS USED

☒ 200 PASSES PER TRUCK

TRUCK	TYPE	SUSPENSION
1	9	1
2	9	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 - 0.8 STANDARD DEVIATION 2.7
 DYNAMIC AND STATIC SINGLE AXLES - 4.7 STANDARD DEVIATION 2.6
 DYNAMIC AND STATIC DOUBLE AXLES - 0.1 STANDARD DEVIATION 3.6
8. ☒ 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 45 , 55 , 65
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3700
- 11.** IS AUTO-CALIBRATION USED AT THIS SITE? (Y/N) ☐ N
 IF YES, LIST AND DEFINE AUTO-CALIBRATION VALUE: _____

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

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ENTERED APR 24 2007

SITE CALIBRATION INFORMATION

- * DATE OF CALIBRATION (MONTH/DAY/YEAR) [01/30/2007]
- * TYPE OF EQUIPMENT CALIBRATED ___ WIM ___ CLASSIFIER x BOTH
- * REASON FOR CALIBRATION

___ REGULARLY SCHEDULED SITE VISIT	___ RESEARCH
___ EQUIPMENT REPLACEMENT	___ TRAINING
___ DATA TRIGGERED SYSTEM REVISION	___ NEW EQUIPMENT INSTALLATION
<u>x</u> OTHER (SPECIFY) ___ LTPP Validation _____	
- * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):

___ BARE ROUND PIEZO CERAMIC	___ BARE FLAT PIEZO	<u>x</u> BENDING PLATES
___ CHANNELIZED ROUND PIEZO	___ LOAD CELLS	___ QUARTZ PIEZO
___ CHANNELIZED FLAT PIEZO	<u>x</u> INDUCTANCE LOOPS	___ CAPACITANCE PADS
___ OTHER (SPECIFY) _____		
- EQUIPMENT MANUFACTURER ___ IRD/PAT Traffic _____

WIM SYSTEM CALIBRATION SPECIFICS**

- **CALIBRATION TECHNIQUE USED:

___ TRAFFIC STREAM -- ___ STATIC SCALE (Y/N)	<u>x</u> TEST TRUCKS
___ NUMBER OF TRUCKS COMPARED	<u>2</u> NUMBER OF TEST TRUCKS USED
	<u>21</u> PASSES PER TRUCK

TYPE PER FHWA 13 BIN SYSTEM	TRUCK	TYPE	SUSPENSION
SUSPENSION: 1 - AIR; 2 - LEAF SPRING	1	<u>9</u>	<u>1</u>
3 - OTHER (DESCRIBE)	2	<u>9</u>	<u>2</u>
	3	_____	_____
- SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)

MEAN DIFFERENCE BETWEEN ---			
DYNAMIC AND STATIC GVW	<u>0.7</u>	STANDARD DEVIATION	<u>2.7</u>
DYNAMIC AND STATIC SINGLE AXLES	<u>-2.6</u>	STANDARD DEVIATION	<u>3.2</u>
DYNAMIC AND STATIC DOUBLE AXLES	<u>1.3</u>	STANDARD DEVIATION	<u>3.5</u>
- 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
- DEFINE THE SPEED RANGES USED (MPH) 45, 55, 65
- CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3700
- ** 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 _x_ MANUAL ___ PARALLEL CLASSIFIERS

13. METHOD TO DETERMINE LENGTH OF COUNT ___ TIME _x_ NUMBER OF TRUCKS

14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

*** FHWA CLASS 9 ___ 0.0 ___ FHWA CLASS ___ ___
*** FHWA CLASS 8 ___ 0.0 ___ FHWA CLASS ___ ___

 FHWA CLASS ___ ___
 FHWA CLASS ___ ___

*** PERCENT "UNCLASSIFIED" VEHICLES: ___ 0.0 ___

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

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SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [7/24/2007]
2. * TYPE OF EQUIPMENT CALIBRATED ____ WIM ____ CLASSIFIER X BOTH
3. * REASON FOR CALIBRATION
 ____ REGULARLY SCHEDULED SITE VISIT ____ RESEARCH
 ____ EQUIPMENT REPLACEMENT ____ TRAINING
 ____ DATA TRIGGERED SYSTEM REVISION ____ NEW EQUIPMENT INSTALLATION
X OTHER (SPECIFY) LTPP Validation
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
 ____ BARE ROUND PIEZO CERAMIC ____ BARE FLAT PIEZO X BENDING PLATES
 ____ CHANNELIZED ROUND PIEZO ____ LOAD CELLS ____ QUARTZ PIEZO
 ____ CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS ____ CAPACITANCE PADS
 ____ OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER IRD/ PAT Traffic

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.** CALIBRATION TECHNIQUE USED:
 ____ TRAFFIC STREAM -- ____ STATIC SCALE (Y/N) X TEST TRUCKS
 ____ NUMBER OF TRUCKS COMPARED ____ 2 NUMBER OF TEST TRUCKS USED
 ____ 20 PASSES PER TRUCK
 TRUCK TYPE SUSPENSION
 1 9 1
 2 9 3
 1st axle leaf spring, second axle rocker bar
 3 - OTHER (DESCRIBE) 3 _____
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)
 MEAN DIFFERENCE BETWEEN ---
 DYNAMIC AND STATIC GVW -0.4 STANDARD DEVIATION 3.1
 DYNAMIC AND STATIC SINGLE AXLES -0.5 STANDARD DEVIATION 4.2
 DYNAMIC AND STATIC DOUBLE AXLES 0.4 STANDARD DEVIATION 5.5
8. 3 ____ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 55 60 65
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3700.00
- 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 X MANUAL ____ PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT ____ TIME X NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
 *** FHWA CLASS 9 0.0 FHWA CLASS ____
 *** FHWA CLASS 8 0.0 FHWA CLASS ____
 FHWA CLASS ____
 FHWA CLASS ____
 *** PERCENT "UNCLASSIFIED" VEHICLES: 0.0

PERSON LEADING CALIBRATION EFFORT: <u>Dean J. Wolf, MACTEC</u> CONTACT INFORMATION: <u>301-210-5105</u>	rev. November 9, 1999
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SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID [_____] *STATE CODE [51] *SHRP SECTION ID [0100]
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SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [7/26/2007]
2. * TYPE OF EQUIPMENT CALIBRATED ____ WIM ____ CLASSIFIER X BOTH
3. * REASON FOR CALIBRATION
 ____ REGULARLY SCHEDULED SITE VISIT ____ RESEARCH
 ____ EQUIPMENT REPLACEMENT ____ TRAINING
 ____ DATA TRIGGERED SYSTEM REVISION ____ NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) LTPP Validation
4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):
 ____ BARE ROUND PIEZO CERAMIC ____ BARE FLAT PIEZO X BENDING PLATES
 ____ CHANNELIZED ROUND PIEZO ____ LOAD CELLS ____ QUARTZ PIEZO
 ____ CHANNELIZED FLAT PIEZO X INDUCTANCE LOOPS ____ CAPACITANCE PADS
 ____ OTHER (SPECIFY) _____
5. EQUIPMENT MANUFACTURER IRD/ PAT Traffic

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
 ____ TRAFFIC STREAM -- ____ STATIC SCALE (Y/N) X TEST TRUCKS
 ____ NUMBER OF TRUCKS COMPARED ____ 2 NUMBER OF TEST TRUCKS USED
 ____ 20 PASSES PER TRUCK
- | TRUCK | TYPE | SUSPENSION |
|-------|--|------------|
| 1 | <u> 9 </u> | <u> 1 </u> |
| 2 | <u> 9 </u> | <u> 3 </u> |
| | 1 st axle leaf spring, second axle rocker bar | |
| 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 0.1 STANDARD DEVIATION 3.0
 DYNAMIC AND STATIC SINGLE AXLES -2.7 STANDARD DEVIATION 5.1
 DYNAMIC AND STATIC DOUBLE AXLES 0.9 STANDARD DEVIATION 4.5
8. 3 ____ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 55 60 65
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) _____
- 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 X MANUAL ____ PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT ____ TIME X NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
 *** FHWA CLASS 9 0.0 FHWA CLASS ____
 *** FHWA CLASS 8 0.0 FHWA CLASS ____
 FHWA CLASS ____
 FHWA CLASS ____
 *** PERCENT "UNCLASSIFIED" VEHICLES: 0.0

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