

SHEET 10 LTPP TRAFFIC DATA TRAFFIC VOLUME AND LOAD ESTIMATE UPDATE-NO SITE COUNT	*STATE ASSIGNED ID	[]
	*STATE CODE	[48]
	*SHRP SECTION ID	[0100]

1. ANNUAL TRAFFIC ESTIMATES

* YEAR	ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	ESTIMATED TOTAL VEHICLES AADT LTPP LANE	*ESTIMATED TOTAL TRUCK AADT LTPP LANE	*ESTIMATED ESAL'S/YR LTPP LANE (1000'S)
2008				1,300	489

2. METHOD FOR ESTIMATING TOTAL VEHICLE AADT (TWO-WAY)

- ☐ Growth factored last year's estimate. (6)
☐ Estimated based on volume counts at nearby locations (3)
☐ Used computerized network analyses. (4)
☐ Factored a single count taken this year at the LTPP site. (1)
☐ Average multiple counts taken this year at the LTPP site. (2)
☐ Average and factored multiple count taken this year at the LTPP site. (5)
☐ Used flow maps. (7)
☐ Other: (8)

3. METHOD FOR ESTIMATING TOTAL TRUCK AADT (TWO-WAY)

- ☐ Used system average from counts taken this year. (6)
☐ Used count data from nearby sites. (3)
☐ Used count data from previous years at the LTPP site. (7)
☐ Used system averages from previous years. (9)
☐ Used computerized network analyses. (4)
☐ Used a single count taken this year at the LTPP site. (5)
☐ Factored a single count taken this year at the LTPP site. (4)
☐ Averaged multiple counts taken this year at the LTPP site. (2)
☐ Other: (10)

4. METHOD FOR ESTIMATEING TOTAL VEHICLES LTPP LANE AADT

- ☐ System distribution factors. (2)
☐ Based on actual lane count data. (1)
☐ Other: (3)

*5. METHOD FOR ESTIMATING TOTAL TRUCKS, LTPP LANE AADT

- ☐ System distribution factors. (2)
☐ Based on actual lane count data. (1)
☒ Other: (3) Projected from available data

*6. METHOD FOR ESTIMAING ESAL/YEAR IN LTPP LANE

- ☐ ESAL/Truck factor (1)
☐ ESAL/Vehicle class. (2) (No. of classes)
☐ ESAL/Axle(3) Sing. Tand. Tri.
☒ Other: (3) Projected from available data

7. ESAL ESTIMATES - SOURCE OF DATA

- ☐ Weight data collected at LTPP site prior years. (2)
☐ Weight data from system averages this year. (3)
☐ Weigl (4)
☐ Weigl
☐ Other:

8. WEIGHT S

- ☐ WIM TRF-MON-EST-ESAL-E-109
☐ Static
☐ Static Traffic loading is 2902 lb
☐ Other: previous year

NAME OF PREPARER	Dan YE	PHONE #	512-977-1845
DATE PREPARED	2/16/2009	REV. February 21, 2000	

ENTERED FEB 20 2009 J P M
ENTERED APR 08 2009 J P M

SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID [_____] *STATE CODE [48] *SHRP SECTION ID [0199]
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SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [12/6/2008]

2. * TYPE OF EQUIPMENT CALIBRATED WIM CLASSIFIER X BOTH

3. * REASON FOR CALIBRATION

<u> </u> REGULARLY SCHEDULED SITE VISIT	<u> </u> RESEARCH
<u> </u> EQUIPMENT REPLACEMENT	<u> </u> TRAINING
<u> </u> DATA TRIGGERED SYSTEM REVISION	<u> </u> NEW EQUIPMENT INSTALLATION
<u> X </u> OTHER (SPECIFY) <u> LTPP Validation </u>	

4. * SENSORS INSTALLED IN LTPP LANE AT THIS SITE (CHECK ALL THAT APPLY):

<u> </u> BARE ROUND PIEZO CERAMIC	<u> </u> BARE FLAT PIEZO	<u> </u> BENDING PLATES
<u> </u> CHANNELIZED ROUND PIEZO	<u> </u> LOAD CELLS	<u> X </u> QUARTZ PIEZO
<u> </u> CHANNELIZED FLAT PIEZO	<u> X </u> INDUCTANCE LOOPS	<u> </u> CAPACITANCE PADS
<u> </u> OTHER (SPECIFY) <u> </u>		

5. EQUIPMENT MANUFACTURER Secondary Equipment

6.** CALIBRATION TECHNIQUE

<u> </u> TRAFFIC STRIP	<u> </u> TRUCKS USED
<u> </u> NUMBER OF TRUCKS	<u> </u> TRUCK SUSPENSION
	<u> </u> 1
	<u> </u> 1
	<u> </u> 2

TYPE PER FHWA SUSPENSION: Do not Enter

7. SUMMARY OF MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

DYNAMIC A	ON <u>2.7</u>
DYNAMIC B	ION <u>3.8</u>
DYNAMIC C	ION <u>4.3</u>

8. 3 NUMBER OF SPEEDS ...

9. DEFINE THE SPEED RANGES USED (MPH)

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3940 - 4740

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 <u> 0 </u>	FHWA CLASS <u> 5 </u>	<u> </u> -8
*** FHWA CLASS 8 <u> -33 </u>	FHWA CLASS <u> </u>	<u> </u>
	FHWA CLASS <u> </u>	<u> </u>
	FHWA CLASS <u> </u>	<u> </u>

*** PERCENT "UNCLASSIFIED" VEHICLES: 2.0

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 [48]
*SHRP SECTION ID [0100]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [12/10/2008]
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 ☐ 3 NUMBER OF TEST TRUCKS USED
☐ 14 PASSES PER TRUCK
- | TRUCK | TYPE | SUSPENSION |
|-------|------|------------|
| 1 | 9 | 1 |
| 2 | 9 | 1 |
| 3 | 9 | 2 |
- 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 0.7 STANDARD DEVIATION 1.4
DYNAMIC AND STATIC SINGLE AXLES -3.1 STANDARD DEVIATION 2.9
DYNAMIC AND STATIC DOUBLE AXLES 1.4 STANDARD DEVIATION 2.7
8. 3 ☐ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 60 65 70
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 995
- 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 ☒ NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:
*** FHWA CLASS 9 0 FHWA CLASS 5 -17
*** FHWA CLASS 8 --- FHWA CLASS --- ---
FHWA CLASS --- ---
FHWA CLASS --- ---
*** PERCENT "UNCLASSIFIED" VEHICLES: 4.0

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

SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID [_____] *STATE CODE [48] *SHRP SECTION ID [0199]
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SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [12/10/2008]
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
<u> X </u> OTHER (SPECIFY) <u> LTPP Validation </u>	
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	<u> X </u> QUARTZ PIEZO
____ CHANNELIZED FLAT PIEZO	<u> X </u> INDUCTANCE LOOPS	____ CAPACITANCE PADS
____ OTHER (SPECIFY) _____		
5. EQUIPMENT MANUFACTURER Kistler sensors and IRD ISINC electronics

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.** CALIBRATION TECHNIQUE USED:

____ TRAFFIC STREAM	____ STATIC SCALE (Y/N)	____ <u> X </u> TEST TRUCKS
____ NUMBER OF TRUCKS COMPARED	____ <u> 3 </u> NUMBER OF TEST TRUCKS USED	
____ <u> 14 </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> 1 </u>
	3	<u> 9 </u>	<u> 2 </u>
7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)

MEAN DIFFERENCE BETWEEN --			
DYNAMIC AND STATIC GVW	____ <u> -1.0 </u>	STANDARD DEVIATION	____ <u> 3.4 </u>
DYNAMIC AND STATIC SINGLE AXLES	____ <u> -1.8 </u>	STANDARD DEVIATION	____ <u> 5.1 </u>
DYNAMIC AND STATIC DOUBLE AXLES	____ <u> -0.6 </u>	STANDARD DEVIATION	____ <u> 4.7 </u>
8. 3 ____ NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) ____ 60 ____ 65 ____ 70 ____
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) 3970 / 4776
- 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	____ <u> X </u> MANUAL	____ PARALLEL CLASSIFIERS
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13. METHOD TO DETERMINE LENGTH OF COUNT ____ TIME X NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

*** FHWA CLASS 9 ____ <u> 0 </u>	FHWA CLASS <u> 5 </u>	____ <u> -8 </u>
*** FHWA CLASS 8 ____ <u> 0 </u>	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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