

ENTERED AUG 20 2001

SHEET 10 LTPP TRAFFIC DATA TRAFFIC VOLUME AND LOAD ESTIMATE UPDATE-NO SITE COUNT	*STATE ASSIGNED ID	[0409]
	*STATE CODE	[42]
	*SHRP SECTION ID	[1605]

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 TRUCKS AADT LTPP LANE	*ESTIMATED ESAL'S/YR LTPP LANE (1000'S)
99	9448	2497	3307	874	305

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)
- ☐ Averaged multiple counts taken this year at the LTPP site. (2)
- ☐ Averaged 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 averages 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. (8)
- ☐ 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. (1)
- ☐ Averaged multiple counts taken this year at the LTPP site. (2)
- ☐ Other: (9) _____

4. METHOD FOR ESTIMATING 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 data count. (1)
- ☐ Other: (3) _____

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

- ☐ ESAL/Truck factor (1)
- ☒ ESAL/Vehicle class. (2) (No. of classes) 8
- ☐ ESAL/Axle(3) Sing. ____ Tand. ____ Tri. ____
- ☐ Other: (4) _____

7. ESAL ESTIMATES - SOURCE OF DATA

- ☒ Weight data collected at LTPP site prior years. (2)
- ☐ Weight data from system averages this year. (3)
- ☐ Weight data from system averages prior years. (4)
- ☐ Weight data from historic W-4 Tables used. (5)
- ☐ Other: (6) _____

8. WEIGHT SCALE TYPE

- ☐ WIM scale. (1)
- ☐ Static scale used for enforcement. (2)
- ☐ Static scale not used for enforcement. (3)
- ☒ Other: (4) NONE

NAME OF PREPARER JOHN PARKER
 DATE PREPARED 7/23/01

PHONE # 717-787-4327

rev. March 12, 2001

SHEET 13
TRAFFIC DATA FILES
TRANSMITTAL FORM

STATE
STATE CODE

Pennsylvania
42

FILENAME	START DATE mm/dd/yy	START TIME hh:mm	END DATE mm/dd/yy	END TIME hh:mm	CLASS SCHEME
C421690.D59	2/5/99	00:00	2/11/99	23:00	F
W421690.D59	2/5/99	00:00	2/11/99	23:00	F
C421606.D50	2/5/99	00:00	2/11/99	23:00	F
W421606.D59	2/5/99	00:00	2/11/99	23:00	F
C421599.D59	2/5/99	00:00	2/11/99	23:00	F
W421599.D59	2/5/99	00:00	2/11/99	23:00	F
C421605.DI9	2/19/99	00:00	2/25/99	23:00	F
W421605.DI9	2/19/99	00:00	2/25/99	23:00	F
C421597.E69	3/6/99	00:00	3/12/99	23:00	F
W421597.E69	3/6/99	00:00	3/12/99	23:00	F
C423044.C19	1/1/99	00:00	3/31/99	23:00	F
C421690.C19	1/1/99	00:00	3/31/99	23:00	F
C427037.C19	1/1/99	00:00	3/31/99	23:00	F
C421606.C19	1/1/99	00:00	3/31/99	23:00	F
C421599.C19	1/1/99	00:00	3/31/99	23:00	F
C421605.C19	1/1/99	00:00	3/31/99	23:00	F
C421597.C19	1/1/99	00:00	3/31/99	23:00	F

NAME OF PREPARER
DATE PREPARED

Denny Williams
5/11/99

PHONE NO. (717) 787-1840

SHEET 13
TRAFFIC DATA FILES
TRANSMITTAL FORM

STATE
STATE CODE

Pennsylvania
42

FILENAME	START DATE mm/dd/yy	START TIME hh:mm	END DATE mm/dd/yy	END TIME hh:mm	CLASS SCHEME
C421606.H19	6/1/99	00:00	6/7/99	23:00	F
W421606.H19	6/1/99	00:00	6/7/99	23:00	F
C421599.FR9	4/28/99	00:00	5/4/99	23:00	F
W421599.FR9	4/28/99	00:00	5/4/99	23:00	F
C421605.FS9	4/29/99	00:00	5/5/99	23:00	F
W421605.FS9	4/29/99	00:00	5/5/99	23:00	F
C421597.HN9	6/24/99	00:00	6/30/99	23:00	F
W421597.HN9	6/24/99	00:00	6/30/99	23:00	F
C423044.F19	4/1/99	00:00	6/30/99	23:00	F
C421690.F19	4/1/99	00:00	6/30/99	23:00	F
C427037.F19	4/1/99	00:00	6/30/99	23:00	F
C421606.F19	4/1/99	00:00	6/30/99	23:00	F
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C421605.F19	4/1/99	00:00	6/30/99	23:00	F
C421597.F19	4/1/99	00:00	6/30/99	23:00	F

NAME OF PREPARER
DATE PREPARED

Denny Williams
8/23/99

PHONE NO. (717) 787-1840

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID [409]
*STATE CODE [42]
*SHRP SECTION ID [1605]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [05/11/1999]
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 PAT

ENTERED SEP 03 2003

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:
☐ TRAFFIC STREAM -- ☐ STATIC SCALE (Y/N) 3S2 TEST TRUCKS
☐ NUMBER OF TRUCKS COMPARED 1 NUMBER OF TEST TRUCKS USED 10
PASSES PER TRUCK
TRUCK TYPE SUSPENSION
1 9 Air
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 5.80 STANDARD DEVIATION 2.4
DYNAMIC AND STATIC SINGLE AXLES --- STANDARD DEVIATION ---
DYNAMIC AND STATIC DOUBLE AXLES --- STANDARD DEVIATION ---
8. 7 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 49 50 51 54 58 44 45
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED) N/A
- 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: N/A
*** FHWA CLASS 9 _____ FHWA CLASS _____
*** FHWA CLASS 8 _____ FHWA CLASS _____
FHWA CLASS _____
FHWA CLASS _____
*** PERCENT "UNCLASSIFIED" VEHICLES: _____

PERSON LEADING CALIBRATION EFFORT: Dar Reed (DTS Technician)
CONTACT INFORMATION: Denny Williams 8/5/03 rev. November 9,

WIM #409

#16 P52

Calculating Percent of Non-Conforming Data Items (must be within +/- 15% for Type II WIM system)

421605

5/11/99

'99

$$d=100[(C-R)/R]$$

d=difference in the value of the data item produced by the WIM system and the corresponding reference value expressed as a percent of the reference value, %

C=value of the data item (truck) produced by the WIM system

R=corresponding reference value for the data item (actual truck weight)

Vehicle class : 9 TRK# 176198 Trl # 2903

Axle 1							
10.7	11.7	15.8	4.3	14.9	28.7	15.8	4

= 43.75

= 70,940 #

Indicate above: Axle spacings, Axle weights

Pass #	Direction	Speed	C (WIM)	R (Reference)	d (Difference)	
1	N	49	75,500	70,940	+4560	+6.7%
2		49	64,300		-6640	-9.7%
3		50	68,200		-2940	-4.7%
4		51	74,700		+3760	+5.7%
5		54	76,400		+5460	+8.7%
6		58	75,500		+4560	+6.7%
7		50	68,600		-2340	-3.7%
8		44	74,100		+3160	+4.7%
9		44	75,000		+4060	+6.7%
10		45	74,100		+3160	+4.7%
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

<div>SHEET 16</div> <div>LTPP MONITORED TRAFFIC DATA</div> <div>SITE CALIBRATION SUMMARY</div>	<div>*STATE ASSIGNED ID<div>409</div></div> <div>*STATE CODE<div>42</div></div> <div>*SHRP SECTION ID<div>1605</div></div>
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SITE CALIBRATION INFORMATION

ENTERED SEP 03 2003

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR)

11/19/1999
2. * TYPE OF EQUIPMENT CALIBRATED

X

 WIM CLASSIFIER BOTH
3. * REASON FOR CALIBRATION

X

 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

X

 CHANNELIZED FLAT PIEZO

X

 INDUCTANCE LOOPS CAPACITANCE PADS OTHER (SPECIFY)
5. EQUIPMENT MANUFACTURER

PAT

WIM SYSTEM CALIBRATION SPECIFICS**

- 6.**CALIBRATION TECHNIQUE USED:

TRAFFIC STREAM -- STATIC SCALE (Y/N)

3S2

 TEST TRUCKS NUMBER OF TRUCKS COMPARED 1 NUMBER OF TEST TRUCKS USED 9 PASSES PER TRUCK TRUCK TYPE SUSPENSION 1 9 Air 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

-3.06

 STANDARD DEVIATION

4.4

DYNAMIC AND STATIC SINGLE AXLES STANDARD DEVIATION

DYNAMIC AND STATIC DOUBLE AXLES STANDARD DEVIATION
8.

7

 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH)

55

52

47

50

57

58

60
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED)

N/A
- 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 :

X

 TIME NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:

N/A

*** FHWA CLASS 9 FHWA CLASS

*** FHWA CLASS 8 FHWA CLASS

FHWA CLASS

FHWA CLASS

*** PERCENT "UNCLASSIFIED" VEHICLES:

PERSON LEADING CALIBRATION EFFORT:	Dar Reed (DTS Technician)	rev. November 9,
CONTACT INFORMATION:	Denny Williams 8/5/03	

Calculating the difference between actual weight and measurement weight

(must be within +/- 15% for Type II WIM system)

$$d=100[(C-R)/R]$$

d= difference in the value of the data item produced by the WIM system and the corresponding reference value expressed as a percent of the reference value, %

C= value of the data item (truck) produced by the WIM system

R= corresponding reference value for the data item (actual truck weight)

Vehicle class : 9

Site: 409

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421605
11/19/99

Axle 1

9970 12.0 4.3 34.5 4.3

9970

Indicate above: Axle spacings, Axle weights

Pass # Direction Speed C (WIM) R (Reference) d (Difference)

vh #

2757	1	N	55	68700	71200	-3.5
2827	2	N	52	64700	71200	-9.4
2906	3	N	55	72400	71200	+1.6
2974	4	N	47	65300	71200	-8.2
3073	5	N	50	69900	71200	-1.8
3178	6	N	50	66400	71200	-6.7
3255	7	N	57	74000	71200	+3.9
3334	8	N	58	69500	71200	-2.4
3415	9	N	60	70300	71200	-1.3
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					

ADJUSTED SENSOR SENS. 1-4 FROM 500 TO 410
ADJUSTED SPEED RANGE 1 CORR. FACTOR FROM 1000 TO 10
ADJUSTED LOOP SPACING LANE 2 FROM 480 TO 49