

SHEET 10 LTPP TRAFFIC DATA TRAFFIC VOLUME AND LOAD ESTIMATE UPDATE - NO SITE COUNT	STATE ASSIGNED ID [303] STATE CODE [04] SHRP SECTION ID [0600]
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1. ANNUAL TRAFFIC ESTIMATES

YEAR	ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	ESTIMATED TOTAL VEHICLES AADT GPS LANE	ESTIMATED TOTAL TRUCKS AADT GPS LANE	ESTIMATED ESAL'S/YR GPS LANE (1000's)
<u>2001</u>	<u>16,105</u>	<u>7,624</u>	<u>12,884</u>	<u>6,099</u>	<u>2,482,000</u> 2482 ESALS ACR

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

- 6 ☒ Growth factored last year's estimate.
☐ Estimated based on volume counts at nearby locations.
☐ Used computerized network analysis.
☒ Other Also compared with historical data

5. METHOD FOR ESTIMATING TOTAL
TRUCKS, GPS LANE, AADT

- 3 ☐ System distribution factors.
☒ Other Assume 80% GPS lane

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

- 7 ☐ Used system average from counts taken this year.
☐ Used count data from nearby sites.
☒ Used count data from previous years at GPS site.
☐ Used system averages from previous year counts.
☐ Used computerized network analysis.
☐ Other Growth factored historical data

6. METHOD FOR ESTIMATING ESAL/YEAR
IN GPS LANE

- ☒ ESAL/Truck factor.
☐ ESAL/vehicle class factors -
 Number of classes
☐ Other ESALS worksheet

4. METHOD FOR ESTIMATING TOTAL VEHICLES
GPS LANE AADT

- 3 ☐ System distribution factors.
☒ Other Assume 80% GPS lane

7. ESAL ESTIMATES - SOURCE OF DATA

- 3 ☐ Prior years data collected at GPS site.
☒ Current year system average.
☐ Prior year system average.
☐ Historical W-4 tables.
☐ Other ESALS worksheet

8. WEIGHT SCALE TYPE

- 1 ☒ WIM Scale.
☐ Static scale used for enforcement.
☐ Static scale not used for enforcement.
☐ Other _____

NOV 05 2003


NAME OF PREPARER Michael Zachary PHONE # 602-712-6346
 DATE PREPARED 5-8-03 Cell: 480-217-4721

SHEET 16
LTPP MONITORED TRAFFIC DATA
SITE CALIBRATION SUMMARY

*STATE ASSIGNED ID [_ _ _ _]
 *STATE CODE [_0_4]
 *SHRP SECTION ID [_0_6_0_0]

SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [_1_0/_3_1/_2_0_0_1]
2. * TYPE OF EQUIPMENT CALIBRATED X WIM CLASSIFIER BOTH
3. * REASON FOR CALIBRATION
 REGULARLY SCHEDULED SITE VISIT RESEARCH
 X EQUIPMENT REPLACEMENT TRAINING
 DATA TRIGGERED SYSTEM REVISION NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) LTPP WIM Calibration Pilot _____
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 PAT

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
 14 PASSES PER TRUCK

TRUCK	TYPE	SUSPENSION
1	9	1
2	9	1
3		
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 +4.49% STANDARD DEVIATION 3.78%
 DYNAMIC AND STATIC SINGLE AXLES -0.32% STANDARD DEVIATION 5.62%
 DYNAMIC AND STATIC DOUBLE AXLES +5.21% STANDARD DEVIATION 7.27%
8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 45-55 56-64 64+
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 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
 FHWA CLASS
 FHWA CLASS
 *** PERCENT "UNCLASSIFIED" VEHICLES:

PERSON LEADING CALIBRATION-EFFORT: Charlie Copeland
 CONTACT INFORMATION: (301) 210-5105 rev. November 9, 1999

ENTD JUN 11 2002

MPT

SHEET 16 LTPP MONITORED TRAFFIC DATA SITE CALIBRATION SUMMARY	*STATE ASSIGNED ID [] *STATE CODE [04] *SHRP SECTION ID [0600]
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SITE CALIBRATION INFORMATION

1. * DATE OF CALIBRATION (MONTH/DAY/YEAR) [10/31/2001]
2. * TYPE OF EQUIPMENT CALIBRATED X WIM CLASSIFIER BOTH
3. * REASON FOR CALIBRATION
 REGULARLY SCHEDULED SITE VISIT RESEARCH
 X EQUIPMENT REPLACEMENT TRAINING
 DATA TRIGGERED SYSTEM REVISION NEW EQUIPMENT INSTALLATION
 X OTHER (SPECIFY) LTPP WIM Calibration Pilot
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 PAT

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
 14 PASSES PER TRUCK

TRUCK	TYPE	SUSPENSION
1	9	1
2	9	1
3		
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 +4.49% STANDARD DEVIATION 3.78%
 DYNAMIC AND STATIC SINGLE AXLES -0.32% STANDARD DEVIATION 5.62%
 DYNAMIC AND STATIC DOUBLE AXLES +5.21% STANDARD DEVIATION 7.27%
8. 3 NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 45-55 mph 56-64 mph 64+ mph
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 MANUAL PARALLEL CLASSIFIERS
13. METHOD TO DETERMINE LENGTH OF COUNT TIME NUMBER OF TRUCKS
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 *** FHWA CLASS 9 FHWA CLASS
 *** FHWA CLASS 8 FHWA CLASS
 FHWA CLASS
 FHWA CLASS
 *** PERCENT "UNCLASSIFIED" VEHICLES:

PERSON LEADING CALIBRATION-EFFORT: Charlie Copeland
 CONTACT INFORMATION: (301) 210-5105 rev. November 9, 1999

ENTD JUN 11 2002

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Sheet 17
LTPP Traffic Data
WIM SITE INVENTORY

STATE_CODE 04
SPS Project_ID 0600

1.* ROUTE I-40 MILEPOST 202 LTPP DIRECTION - N S E W

2.* SITE DESCRIPTION - GRADE 2 % Sag vertical Y/N
Distance from Approach end of Nearest SPS Section 0 m
Nearest SPS section 0 6 6 3

3.* LANE CONFIG -
No. of Lanes LTPP direction 2 Lane width 12 ft or m
Median - 1- painted, 2-physical barrier or grass, 3 - None
Shoulder - 1 - None 2 --Curb and gutter 3 - Paved AC 4 - Paved PCC 5- Unpaved
Shoulder width -- 1 0 ft or m

4.* PAVEMENT TYPE 1- AC 2 - PCC 4- AC/AC 5- AC / PCC 6- PCC/PCC 7- PCC/AC

5.* CONDITION
Surface distresses by type/medium or high severity within WIM section

6. SENSOR SEQUENCE Loop, Bending Plate, Loop

7. PAVEMENT REPLACEMENT AND/OR GRINDING
Straightedge check 10 / 30 / 2001 Pass / Marginal / Unsatisfactory
Short wave Profile 10 / 30 / 2001 Pass / Marginal / Unsatisfactory
Long wave Profile / / Pass / Marginal / Unsatisfactory

8. ANY EFFECTS FROM RAMPS OR LANE TRANSITIONS
Intersection/driveway within 300 m upstream of sensor location Y, distance / N
Intersection/driveway within 300 m downstream Y sensor location Y, distance / N
Is shoulder routinely used for turns/passing? N

9. DRAINAGE - Bending plate and load cell systems only
Clearance under plate 0.6 in or mm
1- Open to ground 2 - Pipe to culvert or ditch 3 - None
Clearance/access to flush fines from under system Y / N

10. CABINET
LOCATION same side of road as LTPP lane Y/N Median Y/N Behind barrier Y / N
DISTANCE from system 65 ft or m
TYPE
ACCESS controlled by LTPP STATE JOINT Key / Combination
Responsible individual - name and phone number Estomih Kombe

phone #

Sheet 17
LTPP Traffic Data
WIM SITE INVENTORY

STATE_CODE _04_
SPS Project_ID _0600_

11. POWER

Distance to cabinet from drop ____ _1_ _7_ ft overhead / underground / solar
Service provider _____

12. TELEPHONE

Distance to cabinet from drop ____ _0_ m overhead / under ground / cell
Service provider _____

13. SYSTEM (software & version no.) _____

Computer connection – RS232 / Parallel port / USB / Other

14. TEST TRUCK TURNAROUND TIME 20 minutes DISTANCE 8.0 miles

Photo of power source – filename PA310029.jpg

Photo of phone source – filename _____

Photo of cabinet exterior – filename PA310004.jpg

Photo of cabinet interior – filename PA300024.jpg

Photo of installed sensors

- weight LTPP lane -- filename PA310001.jpg
- classification LTPP lane -- filename PA310001.jpg
- other – 1 _____
 - -- filename _____
- other – 2 _____
 - -- filename _____

Photo in direction of travel taken at sensors along LTPP lane

– filename _____

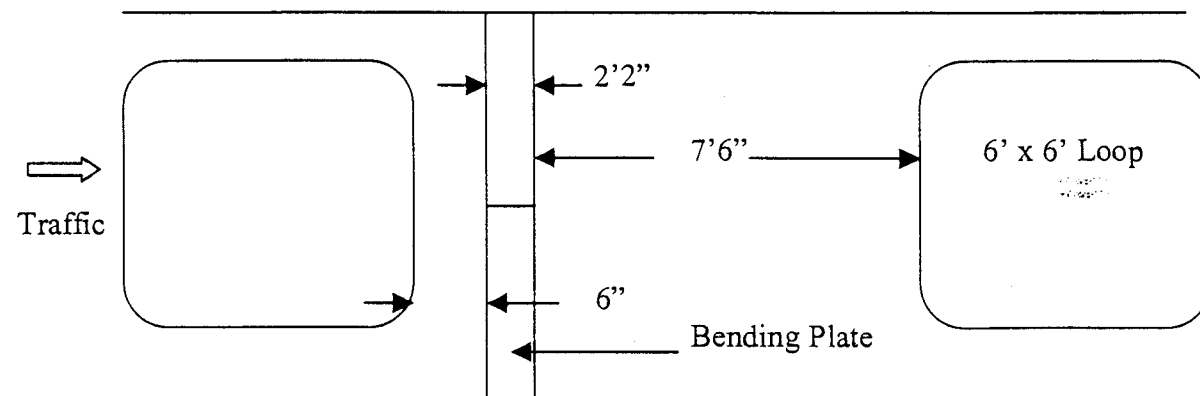
Photo upstream direction taken at sensors looking back along LTPP lane

– filename _____

COMPLETED BY : R. Plett

PHONE (775) 825-5885 DATE COMPLETED 11 / 12 / 2001

Sketch of equipment layout



SHEET 19 LTPP TRAFFIC DATA SPS WIM VALIDATION TEST TRUCK INFORMATION	DATE [31\ 10\ 01]
	(dd/mm/yy)
	STATE CODE [04]
	SPS WIM ID [0 6 0 0]

1.* Truck Number 1 2.* FHWA Class 9 3.* Number of Axles 5

AXLES

Axle	4. Empty Truck Axle Weights (lb.)	5.* Pre-Test Loaded Axle Weights (lb.)	6.* Post-Test Loaded Axle Weights (lb.)	7.* Measured Directly or Calculated?
A		<u>11030</u>	<u>10740</u>	<u>D</u>
B		<u>14680</u>	<u>14250</u>	<u>D</u>
C		<u>14680</u>	<u>14250</u>	<u>D</u>
D		<u>14730</u>	<u>14490</u>	<u>D</u>
E		<u>14210</u>	<u>14490</u>	<u>D</u>
F				

GEOMETRY

8.* Tractor Cab Style - Cab Over Engine / Conventional 9.* Sleeper Cab? (Y)N

10.* Make: Frieghtliner 11.* Model: COE 13. Tractor Tare Weight (lb.): _____

12.* Trailer Load Distribution Description: 14. Trailer Tare Weight (lb.): _____

4 x Jersey barriers on a lowbed trailer. Leading axle on the triple axle trailer was in the raised position.

15.* Axle Spacing (ft & inches) 6.* Kingpin Offset From Axle B (ft.): 2'2"
(+ is to the rear)

A to B 9'2"

B to C 4'3" C to D 38'6.5"

D to E 4'6" E to F _____

SUSPENSION

Axle	17. Tire Size	18.* Suspension Description (leaf, air, no. of leaves, taper or flat leaf, etc.)
A	<u>11R22.5</u>	<u>Leaf Spring - 2 leaves</u>
B	<u>11R22.5</u>	<u>Air</u>
C	<u>11R22.5</u>	<u>Air</u>
D	<u>11R22.5</u>	<u>Air</u>
E	<u>11R22.5</u>	<u>Air</u>
F		

Measured by: R. Plett Verified: _____

SHEET 19 LTPP TRAFFIC DATA SPS WIM VALIDATION TEST TRUCK INFORMATION	DATE [31 \ 10 \ 01]
	(dd/mm/yy)
	STATE CODE [04]
	SPS WIM ID [0 6 0 0]

1.* Truck Number 2 2.* FHWA Class 9 3.* Number of Axles 5

AXLES

Axle	4. Empty Truck Axle Weights (lb.)	5.* Pre-Test Loaded Axle Weights (lb.)	6.* Post-Test Loaded Axle Weights (lb.)	7.* Measured Directly or Calculated?
A		<u>11250</u>	<u>10860</u>	<u>D</u>
B		<u>17740</u>	<u>17560</u>	<u>D</u>
C		<u>17880</u>	<u>17560</u>	<u>D</u>
D		<u>15720</u>	<u>15370</u>	<u>D</u>
E		<u>14850</u>	<u>15330</u>	<u>C</u>
F				

GEOMETRY

8.* Tractor Cab Style - Cab Over Engine Conventional 9.* Sleeper Cab? (Y)N

10.* Make: Frightliner 11.* Model: Conventional 13. Tractor Tare Weight (lb.): _____

12.* Trailer Load Distribution Description: _____ 14. Trailer Tare Weight (lb.): _____

Stone on 10 pallets. Centrally located on a flat deck trailer.

15.* Axle Spacing (ft & inches) 6.* Kingpin Offset From Axle B (ft.): 2'3"

(+ is to the rear)

A to B 19'5"

B to C 4'6" C to D 34'4"

D to E 10'2.5" E to F _____

SUSPENSION

Axle	17. Tire Size	18.* Suspension Description (leaf, air, no. of leaves, taper or flat leaf, etc.)
A	<u>11R24.5</u>	<u>Leaf Spring - 2 leaves</u>
B	<u>11R24.5</u>	<u>Air</u>
C	<u>11R24.5</u>	<u>Air</u>
D	<u>255/70R22.5</u>	<u>Air</u>
E	<u>255/70R22.5</u>	<u>Air</u>
F		

Measured by: R. Plett Verified: _____