



SHEET 12 LTPP TRAFFIC DATA COLLECTION SITE	STATE ASSIGNED ID	[ 3909 ]
	STATE CODE	[ 46 ]
	SHRP SECTION ID	[ 3052 ]
	EFFECTIVE DATE	[ 02/19/02 ]

HIGHWAY RT. NO. US 14 MILEPOST NO. MRM 376

LOCATION West of Manchester

VEHICLE CLASSIFICATION METHOD: FHWA ☒ OTHER ☐ # BINS ☐

TYPE OF CLASSIFICATION EQUIPMENT: PORTABLE ☐ PERMANENT ☒

AVC EQUIPMENT MAKE/MODEL NO. ☐

SENSOR TYPE ☐

WEIGHT SCALE TYPE: PORT. WIM ☐ PERM. WIM ☒ OTHER ☐

EQUIPMENT MAKE/MODEL NO. PAT DAW 100

SENSOR TYPE Bending Plate

METHOD OF CALIBRATION: Intitial calibration was done with a 5 axle semi having known weights and axle spacings.  
System will use auto calibration algorithms on 5 axle semi's during system operation.

FREQUENCY OF CALIBRATION: Yearly using 5 axle semi's from traffic stream with indepent weights by Highway Patrol Static Scale

COMMENTS: Data for Months of January thru December except October  
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NAME OF PREPARER	<u>Kenneth E. Marks</u>	PHONE #	<u>(605) 773-3336</u>
DATE PREPARED	<u>2/23/2007</u>		

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EQUIPMENT MAKE/MODEL NO. PAT DAW 100

SENSOR TYPE Bending Plate

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COMMENTS: Data for the months of January thru December except November.

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NAME OF PREPARER <u>Kenneth E. Marks</u>	PHONE # <u>(605) 773-3336</u>
DATE PREPARED <u>2/25/2009</u>	

SHEET 12 LTPP TRAFFIC DATA COLLECTION SITE	STATE ASSIGNED ID	[ 3909 ]
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	EFFECTIVE DATE	[ 02/19/02 ]

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LOCATION West of Manchester

VEHICLE CLASSIFICATION METHOD: FHWA ☒ OTHER ☐ # BINS ☐

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AVC EQUIPMENT MAKE/MODEL NO. ☐

SENSOR TYPE ☐

WEIGHT SCALE TYPE: PORT. WIM ☐ PERM. WIM ☒ OTHER ☐

EQUIPMENT MAKE/MODEL NO. PAT DAW 100

SENSOR TYPE Bending Plate

METHOD OF CALIBRATION: Intital calibration was done with a 5 axle semi having known weights and axle spacings.  
System will use auto calibration algorithms on 5 axle semi's during system operation.

FREQUENCY OF CALIBRATION: Yearly using 5 axle semi's from traffic stream with indepent weights by Highway Patrol Static Scale

COMMENTS: Data for Months of January thru December

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NAME OF PREPARER <u>Kenneth E. Marks</u>	PHONE # <u>(605) 773-3336</u>
DATE PREPARED <u>2/23/2006</u>	

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HIGHWAY RT. NO. US 14 MILEPOST NO. MRM 376

LOCATION West of Manchester

VEHICLE CLASSIFICATION METHOD: FHWA X OTHER            # BINS           

TYPE OF CLASSIFICATION EQUIPMENT: PORTABLE            PERMANENT X

AVC EQUIPMENT MAKE/MODEL NO.           

SENSOR TYPE           

WEIGHT SCALE TYPE: PORT. WIM            PERM. WIM X OTHER           

EQUIPMENT MAKE/MODEL NO. ISNIC - W3 IRD

SENSOR TYPE Bending Plate

METHOD OF CALIBRATION: Initial calibration was done with a 5 axle semi having known weights and axle spacings.  
System will use auto calibration algorithms on 5 axle semi's during system operation.

FREQUENCY OF CALIBRATION: Yearly using 5 axle semi's from traffic stream with indepent weights by Highway Patrol Static Scale

COMMENTS: Data for the months of January thru December except August, September and October.

NAME OF PREPARER Kenneth E. Marks PHONE # (605) 773-3336  
DATE PREPARED 2/25/2010

SHEET 13  
TRAFFIC DATA FILES  
TRANSMITTAL FORM

STATE South Dakota  
STATE CODE 46

FILENAME	START DATE mm/dd/yy	START TIME hh:mm	END DATE mm/dd/yy	END TIME hh:mm	CLASS. SCHEME
C463052.C1i ✓	01/01/2008	00:00	01/31/2008	23:59	FHWA
W463052.C1i ✓	01/01/2008	00:00	01/31/2008	23:59	FHWA
C463052.D1i ✓	02/01/2008	00:00	02/28/2008	23:59	FHWA
W463052.D1i ✓	02/01/2008	00:00	02/28/2008	23:59	FHWA
C463052.E1i ✓	03/01/2008	00:00	03/31/2008	23:59	FHWA
W463052.E1i ✓	03/01/2008	00:00	03/31/2008	23:59	FHWA
C463052.F1i ✓	04/01/2008	00:00	04/30/2008	23:59	FHWA
W463052.F1i ✓	04/01/2008	00:00	04/30/2008	23:59	FHWA
C463052.G1i ✓	05/01/2008	00:00	05/31/2008	23:59	FHWA
W463052.G1i ✓	05/01/2008	00:00	05/31/2008	23:59	FHWA
C463052.H1i ✓	06/01/2008	00:00	06/30/2008	23:59	FHWA
W463052.H1i ✓	06/01/2008	00:00	06/30/2008	23:59	FHWA
C463052.I1i ✓	07/01/2008	00:00	07/31/2008	23:59	FHWA
W463052.I1i ✓	07/01/2008	00:00	07/31/2008	23:59	FHWA
C463052.J1i ✓	08/01/2008	00:00	08/31/2008	23:59	FHWA
W463052.J1i ✓	08/01/2008	00:00	08/31/2008	23:59	FHWA
C463052.K1i ✓	09/01/2008	00:00	09/30/2008	23:59	FHWA
W463052.K1i ✓	09/01/2008	00:00	09/30/2008	23:59	FHWA
C463052.L1i ✓	10/01/2008	00:00	10/31/2008	23:59	FHWA
W463052.L1i ✓	10/01/2008	00:00	10/31/2008	23:59	FHWA
C463052.N1i ✓	12/01/2008	00:00	12/31/2008	23:59	FHWA
W463052.N1i ✓	12/01/2008	00:00	12/31/2008	23:59	FHWA

PREPARED BY: Kenneth E. Marks  
DATE PREPARED: 02/25/2009

PHONE # : (605) 773-3336

Year 2002

SHEET 14 LTPP TRAFFIC DATA  LOG OF CHANGES AT GPS TEST LOCATIONS WITH PERM. AVC OR WIM	STATE ASSIGNED ID <u>3909</u> STATE CODE <u>46</u> SHRP SECTION ID <u>3052</u>
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LOCATION   West of Manchester                      TYPE EQUIP.                                             PAT Bending Plate  
 MILEPOST NO.                                             MRM 376                      MODEL #                                             DAW100

DATE OF CHANGE	TIME OF CHANGE	DESCRIPTION OF CHANGE	PERSON MAKING CHANGE	PHONE	NEW EQUIP. SERIAL#
10/01/1996		Installation of DAW100 BP		(605) 546-0215	
01/08/1997		Turn Auto Calibration OFF Due To Low Traffic volumes resulting in gross calibration adjustments	Daniel Strand & Dale Engelman		
05/07/1997	11:00	Update EPROM to version 8.65 which will compensate for temperature	Daniel S. & Daris O.		
07/02/2001		Removed WIM operating system from cabinet. The system was taken offline	Dan Strand Jon Becker	(605) 773-3871 (605) 773-6242	
09/10/2001	A.M.	The operating system was reinstalled, and it was put back online. The EB lane is not registering axles correctly.	Dan Strand	(605) 773-3871	
06/17/2002		The calibration process was performed at this site on Monday June 17th.	Darin Charlson Jon Becker	(605) 773-5026 (605) 773-6242	

SHEET 16  
LTPP MONITORED TRAFFIC DATA  
SITE CALIBRATION SUMMARY

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

46

3052

EB  
LTPP

SITE CALIBRATION INFORMATION

1. \*DATE OF CALIBRATION (MONTH/DAY/YEAR) 6/17/2003
2. \*TYPE OF EQUIPMENT CALIBRATED X WIM CLASSIFIER BOTH
3. \*REASON FOR CALIBRATION  
X REGULARLY SCHEDULED SITE VISIT  
EQUIPMENT REPLACEMENT  
DATA TRIGGERED SYSTEM REVISION  
OTHER (SPECIFY)  
ENTERED AUG 30 2004  
RESEARCH  
TRAINING  
NEW EQUIPMENT INSTALLATION
4. \*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  
INDUCTANCE LOOPS  
BENDING PLATES  
QUARTZ PIEZO  
CAPACITANCE PADS
5. EQUIPMENT MANUFACTURER PAT/IRD

WIM SYSTEM CALIBRATION SPECIFICS\*\*

- 6.\*\* CALIBRATION TECHNIQUE USED:  
X TRAFFIC STREAM  
STATIC SCALE (Y / N)  
TEST TRUCKS  
17 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 3.5  
DYNAMIC AND STATIC SINGLE AXLES 12.3  
DYNAMIC AND STATIC DOUBLE AXLES  
STANDARD DEVIATION 6.9  
STANDARD DEVIATION 10.9  
STANDARD DEVIATION
8. NA NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED
9. DEFINE THE SPEED RANGES USED (MPH) 55 - 69 MPH
10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED)
- 11.\*\* IS AUTO-CALIBRATION USED AT THIS TIME? (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 X TIME NUMBER OF TRUCKS
14. MEAN DIFFERENCE IN VOLUMES BY VEHICLES CLASSIFICATION:  
\*\*\* FHWA CLASS 9  
\*\*\* FHWA CLASS 8  
FHWA CLASS  
FHWA CLASS  
FHWA CLASS  
FHWA CLASS  
\*\*\* PERCENT "UNCLASSIFIED" VEHICLES:

PERSON LEADING CALIBRATION EFFORT:

CONTACT INFORMATION:

rev. November 9, 1999



<b>SHEET 16</b> <b>LTPP MONITORED TRAFFIC DATA</b> <b>SITE CALIBRATION SUMMARY</b>	* STATE ASSIGNED ID	[ ] [ ] [ ] [ ]
	* STATE CODE	[ ] [ ]
	* SHRP SECTION ID	[ ] [ ] [ ] [ ]

SITE CALIBRATION INFORMATION

1. \*DATE OF CALIBRATION (MONTH/DAY/YEAR) [ 6 / 17 / 2002 ]

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 \_\_\_\_\_

WIM SYSTEM CALIBRATION SPECIFICS\*\*

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

7. SUMMARY CALIBRATION RESULTS (EXPRESSED AS A PERCENT)  
MEAN DIFFERENCE BETWEEN ---  
DYNAMIC AND STATIC GVW  6.9  STANDARD DEVIATION  2.7   
DYNAMIC AND STATIC SINGLE AXLES  4.4  STANDARD DEVIATION  4.1   
DYNAMIC AND STATIC DOUBLE AXLES   STANDARD DEVIATION

8.   NUMBER OF SPEEDS AT WHICH CALIBRATION WAS PERFORMED

9. DEFINE THE SPEED RANGES USED (MPH)  57 - 69 MPH

10. CALIBRATION FACTOR (AT EXPECTED FREE FLOW SPEED)

11.\*\* IS AUTO-CALIBRATION USED AT THIS TIME? (Y / 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

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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: _____
CONTACT INFORMATION: _____ rev. November 9, 1999