

WIM System Field Calibration and Validation Handout Guide

Michigan, SPS-1
SHRP ID – 260100

Validation Date: May 10, 2011



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1 Site Information

Site ID:	260100	State:	Michigan
LTPP Region:	North Atlantic	Configuration:	Quartz Piezo–Loop–Quartz Piezo
Controller Type:	DAW	Sensor Type:	Quartz Piezo
Power:	AC	Communication:	Cellular
Class Scheme:	LTPP Mar 06	CPU type/setup:	DAW190

2 Contact Information

Agency	Contact	Position	Phone	E-Mail
FHWA	Debbie Walker	COTR	202 493-3068	deborah.walker@dot.gov
FHWA	Robert Conway	FHWA Division	517-702-1842	robert.j.conway@dot.gov
RSC	Frank Meyer	Project Manager	716-632-0804	fmeyer@stantec.com
MDOT	Andrea Clover	LTPP Coord.	517-322-5683	clovera@michigan.gov
MDOT	Tom Hynes	LTPP Contact	517-322-5711	hynest@michigan.gov
MDOT	David Weber	Traffic Contact	517-322-6935	weberd@michigan.gov
MDOT	James Kramer	Traffic Contact	517-322-1736	kramerj2@michigan.gov
ARA	Dean Wolf	Task Leader	717-512-6638	dwolf@ara.com
ARA	Olga Selezneva	Project Manager	410-540-9949	oselezneva@ara.com

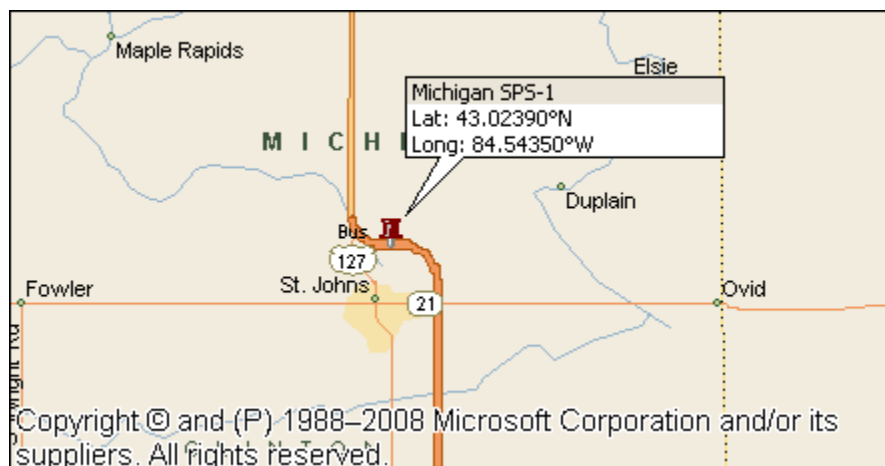
3 Schedule of Events

Date	Event	Location	Start Time
5/09/11	Travel	East Lansing, MI	TBD
5/10/11	Test Truck Weigh/Measure/Inspection	Roadtrip Oasis	6:30 am
5/10/11	Equipment Assessment	WIM Site	7:30 am
5/10/11	Initial Performance Evaluation	WIM Site	8:00 am
5/10/11	System Test/Class and Speed Study	WIM Site	TBD
5/10/11	Test Truck Weigh/Measure/Inspection	Roadtrip Oasis	6:30 am
5/10/11	Calibration/Validation	WIM Site	7:30 am
5/11/11	Travel	Camp Hill, PA	TBD

4 Maps

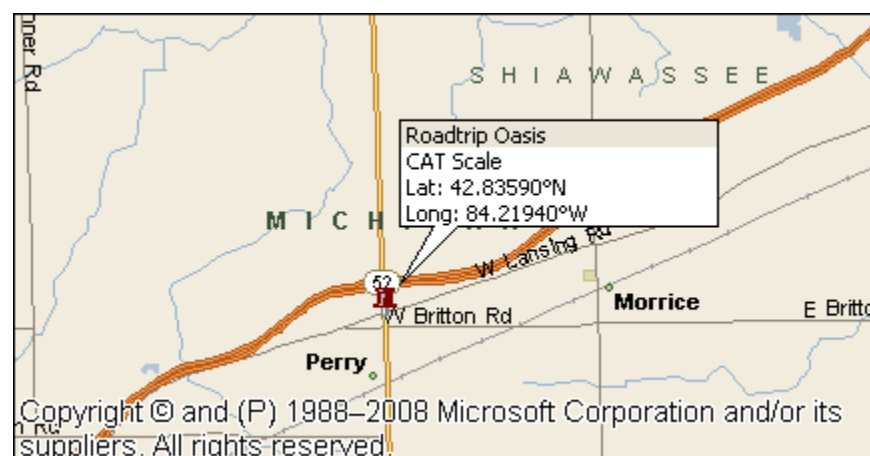
4.1 Site Location

Location:	US-27 South, 2.4 miles north of SR 21		Dir:	SB
Latitude:	43.0239°	Longitude:	-84.5435°	



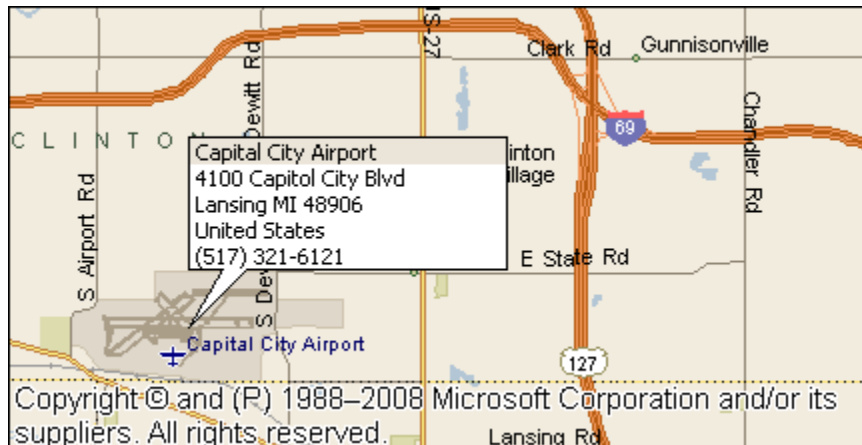
4.2 Truck Scale Location

Name:	Roadtrip Oasis	Location:	I-69, Exit 105, Perry, MI
Latitude:	42.8359°	Longitude:	-84.2194°



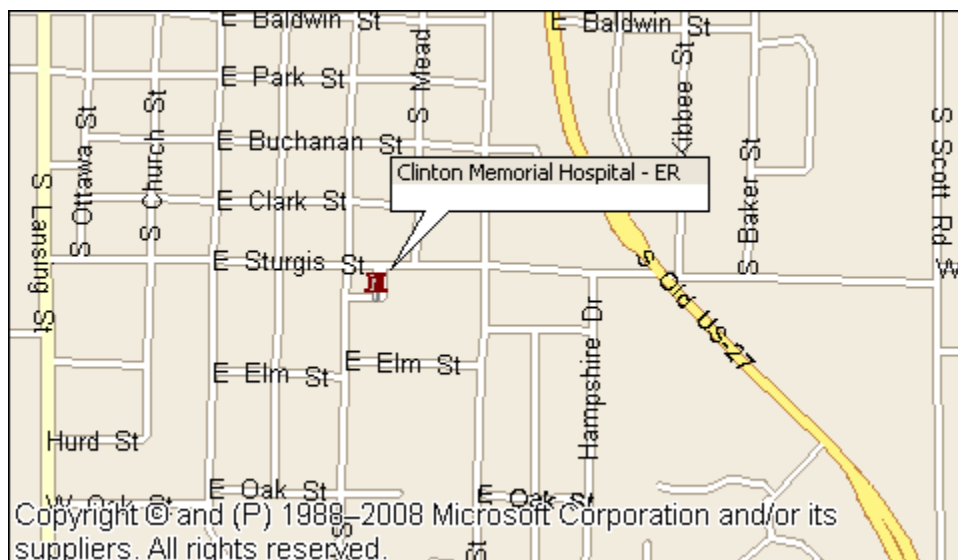
4.3 Airport Location

Name:	Capital City Airport	Location:	Lansing, MI
Latitude:	42.7767°	Longitude:	-84.5847°



4.4 Hospital Location

Name:	Clinton Memorial Hospital - ER		
Phone:	989-224-6881	Location:	805 South Oakland Street, St. John's, MI



5 Occupational Health and Safety Plan

All fieldwork in the right-of-way will be carried out when the ground visibility is more than 3 km, and when there is no accumulation of water, snow, or ice is on the pavement.

To the extent possible, inspection work during extremely high and low temperatures will be avoided. If the work becomes necessary, workers will be reminded to make appropriate precautions (wear protective clothing, drink fluids, and avoid prolonged exposure to severe weather conditions).

All personnel present on the right-of-way will wear approved safety gear (boots, reflective safety vest, and helmet).

The following items will be available at the site: a standard first-aid kit, a cell phone, and the location of nearby hospital(s).

6 Contingency Plan

If inclement weather is forecasted prior to mobilizing to the site, the Project Manager will make the final decision to postpone the Validation visit. The Task Leader is responsible for contacting all parties involved to inform them of the postponement. He is also responsible for rearranging travel.

Once the Validation team is on-site, the On-Site Task Leader is responsible for making decisions to delay or postpone the Validation. He will contact the Project Manager to make recommendations for completing the Validation, and the Project Manager will make the final decision to cancel or postpone. The On-Site Task Leader is responsible for contacting the COTR and all other participating parties to inform them of the delay or postponement.

Traffic Sheet 17 LTPP MONITORED TRAFFIC DATA WIM SITE INVENTORY	STATE CODE:	26
	SPS WIM ID:	260100
	DATE (mm/dd/yyyy)	5/10/2011

1. ROUTE: US-27 **MILEPOST:** unk **LTPP DIRECTION:** south

2. WIM SITE DESCRIPTION

Grade: <1% Sag Vertical: N
 Nearest Upstream SPS Section: unknown
 Distance from sensors to SPS Section: 3.05 miles

3. LANE CONFIGURATION

Lanes in LTPP direction:	<u>2</u>	Median:	<u>3 - grass</u>
Lane width:	<u>12'</u>	Shoulder:	<u>2 - paved AC</u>
Shoulder width:	<u>11'</u>		

4. PAVEMENT TYPE PCC

5. PAVEMENT SURFACE CONDITION - Distress Survey

Date: <u>5/10/11</u>	Photo Filename: <u>260100_upstream_05_10_11.jpg</u>
Date: <u>5/10/11</u>	Photo Filename: <u>260100_downstream_05_10_11.jpg</u>
Date:	Photo Filename:

6. SENSOR SEQUENCE

Quartz - Loop - Quartz

7. REPLACEMENT AND/OR GRINDING

Date: _____
Date: _____
Date: _____

8. RAMPS OR INTERSECTIONS

Intersection within 300' upstream of site:	N
Intersection within 300' downstream of site:	N
Is shoulder routinely used for turning?	N

9. DRAINAGE

Drainage (*bending plate and load cell*) : _____
 Clearance under plate (in.): _____
 Clearance /access to flush fines from under system: _____

Traffic Sheet 17 LTPP MONITORED TRAFFIC DATA WIM SITE INVENTORY	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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10. CABINET LOCATION

Same side of road as LTPP lane: Y
Distance from edge of traveled lane: 50 ft
distance from system: 45 ft
type: M

Cabinet access controlled by: Agency
Contact name: Jim Kramer Phone # 517-322-1736
Alternate name: Tom Foltz Phone # 517-712-1948

11. POWER

Distance to cabinet from drop: 165 ft
Type: AC
AC in cabinet? Y
Service provider: _____ Phone # _____

12. TELEPHONE

Distance to cabinet from drop: 165 ft
Type: landline
Service provider: _____ Phone # _____

13. SYSTEM

Software and version no. V53
Computer connection: RS-232

14. TEST TRUCK TURNAROUND TIME

Duration: 8 minutes Distance: 6.7 miles

15. PHOTOS

	Filename
Power source:	<u>260100_power_service_box_05_10_11.jpg</u>
Phone source:	<u>260100_telephone_pedestal_05_10_11.jpg</u>
Cabinet exterior:	<u>260100_cabinet_exterior_05_10_11.jpg</u>
Cabinet interior:	<u>260100_cabinet_interior_front_05_10_11.jpg</u>
Weight sensors:	<u>260100_leading_WIM_sensor_05_10_11.jpg</u>
	<u>260100_trailing_WIM_sensor_05_10_11.jpg</u>
Other sensors:	<u>260100_loop_sensor_05_10_11.jpg</u>
	<u>0</u>
Downstream from sensors on LTPP lane:	<u>260100_downstream_05_10_11.jpg</u>
Upstream from sensors on LTPP lane:	<u>260100_upstream_05_10_11.jpg</u>

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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1. DATA PROCESSING

- a. Download: State only
- b. Data review: State
If state, how often?
- c. Data submission State
If state how often?

2. EQUIPMENT

- a. Purchase State
- b. Installation State personnel
- c. Maintenance State personnel
Expiration Date
- d. Calibration LTPP
- e. Manuals and software control: State
- f. Power
i. Type Underground ii. Payment State
- g. Communication
i. Type Landline ii. Payment State

3. PAVEMENT

- a. Type Portland Concrete Cement
- b. Allowable Rehabilitation activities Maintenance only
- c. Profile Site Markings Temporary

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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4. Onsite Activities

- a. WIM Validation Check advance notice required

_____ Days 2 Weeks

- b. Notice for straightedge and grinding check

_____ Days 2 Weeks

i. On site lead LTPP

ii. Accept grinding State

- c. Authorization to calibrate site State

- d. Calibration routine LTPP annually

Other: _____

- e. Test Vehicle Responsibilities

- i. Trucks

1st- Air suspension 3S2 LTPP

2nd- Air Suspension 3S2 LTPP

3rd- _____

4th- _____

ii. Loads LTPP

iii. Drivers LTPP

- f. Contractor(s) with prior experience in wim calibration in state:

- g. Access to cabinet State only

- h. State personel required on site Yes

- i. Traffic control required No

- J. Enforcement coordination required No

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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5. SITE SPECIFIC CONDITIONS

- a. Funds and accountability: _____
- b. Reports: _____
- c. Other: _____
- c. Special Conditions _____

6. CONTACTS

- a. Equipment (operational status, access, etc.)
Name Jim Kramer Phone # 517-322-1736
Agency Michigan DOT
- b. Maintenance (equipment)
Name Jim Kramer Phone # 517-322-1736
Agency Michigan DOT
- c. Data Processing and pre-visit data
Name Jim Kramer Phone # 517-322-1736
Agency Michigan DOT
- d. Construction schedule and verification
Name _____ Phone # _____
Agency _____
- e. Test Vehicles (trucks, loads, drivers)
Name Brian Hitchcock Phone # 517-521-2124
Agency MBH Trucking
- f. Traffic control
Name _____ Phone # _____
Agency _____
- g. Enforcement coordination
Name _____ Phone # _____
Agency _____
- h. Nearest static scale
Name Roadside Oasis Location: I-69, exit 105
Phone: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 26
	SPS WIM ID: 260100
	DATE (mm/dd/yyyy) 5/10/2011

CALIBRATION TEST TRUCK - Primary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		11140	10870	Direct
B		16675	16635	Direct
C		16675	16635	Direct
D		16825	16805	Direct
E		16825	16805	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 78140
c. Post Test Loaded Weight: 77750
d. Difference Post Test - Pre-Tests: 390

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☒

b. Make: Peterbilt
c. Model: _____

d. Trailer Load Distribution Description:

palletized bagged fertilizer

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - (feet and tenths)

A to B 20.4 B to C 4.4 C to D 34.3 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 63.2
i. Kingpin offset from Axle B (units) 2 photo: ☐
j. Overall Length - ☒ Measured 75.0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F
	107	105	108.9	117.2	
133.9	105.6	106.7	109.5	109.4	
128.7	102.2	103.3	108.6	112.4	
	101.8	102.9	88.9	114.1	

PART B

Table 1 - Raw Measurements -Platform Scale

Axles	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Primary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Primary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	11140	16670	16670	16830	16830		78140
2	11140	16680	16680	16820	16820		78140
Avg.	11140	16675	16675	16825	16825		78140

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10840	16650	16650	16800	16800		77740
2	10900	16620	16620	16810	16810		77760
Avg.	10870	16635	16635	16805	16805		77750

Validation Test Truck Run Set - Pre

Measured By: _____

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26
	SPS WIM ID: 260100
	DATE (mm/dd/yyyy) 5/10/2011

CALIBRATION TEST TRUCK - Secondary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		11800	11600	Direct
B		14370	14095	Direct
C		14370	14095	Direct
D		13520	13690	Direct
E		13520	13690	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67580
c. Post Test Loaded Weight: 67170
d. Difference Post Test - Pre-Tests: 410

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☒

b. Make: Peterbilt
c. Model: _____

d. Trailer Load Distribution Description:

Palletized bagged fertilizer

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - (feet and tenths)

A to B 20.0 B to C 4.2 C to D 35.3 D to E 4.0 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 63.5
i. Kingpin offset from Axle B (units) 1.6 photo: ☐
j. Overall Length - ☒ Measured 74.2

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F
	108.7	105.8	108.5	78.9	
130	106.2	109.6	107.9	114.4	
130.7	107.1	107.7	105.6	111.4	
	94	106.9	106.1	104.4	

PART B

Table 1 - Raw Measurements -Platform Scale

Axles	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Secondary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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CALIBRATION TEST TRUCK - Secondary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	11800	14370	14370	13520	13520		67580
2	11800	14370	14370	13520	13520		67580
Avg.	11800	14370	14370	13520	13520		67580

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	11620	14090	14090	13690	13690		67180
2	11580	14100	14100	13690	13690		67160
Avg.	11600	14095	14095	13690	13690		67170

Validation Test Truck Run Set - Pre

Measured By: _____

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 26
	SPS WIM ID: 260100
	DATE (mm/dd/yyyy) 5/11/2011

CALIBRATION TEST TRUCK - Primary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5
3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		10810	10580	Direct
B		16495	16440	Direct
C		16495	16440	Direct
D		16815	16800	Direct
E		16815	16800	Direct
F				

4. GVW (same units as axles)

- a. Empty GVW: _____
- b. Average Pre-Test Loaded weight: 77430
- c. Post Test Loaded Weight: 77055
- d. Difference Post Test - Pre-Tests: 375

5. TRUCK DESCRIPTION

- a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☒

- b. Make: Peterbilt
- c. Model: _____

d. Trailer Load Distribution Description:

palletized bagged fertilizer

photo: ☒

- e. Tractor Tare weight - _____ - _____
- f. Trailer Tare weight - _____ - _____
- g. Axle Spacing - (feet and tenths)

A to B 20.4 B to C 4.4 C to D 34.3 D to E 4.1 E to F _____

- h. Wheelbase - ☐ Measured _____ ☒ Computed 63.2
- i. Kingpin offset from Axle B (units) 2 photo: ☐
- j. Overall Length - ☒ Measured 75.0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Primary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F
	107	105	108.9	117.2	
133.9	105.6	106.7	109.5	109.4	
128.7	102.2	103.3	108.6	112.4	
	101.8	102.9	88.9	114.1	

PART B

Table 1 - Raw Measurements -Platform Scale

Axles	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Primary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Primary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10840	16480	16480	16820	16820		77440
2	10780	16510	16510	16810	16810		77420
Avg.	10810	16495	16495	16815	16815		77430

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	10540	16470	16470	16800	16800		77070
2	10620	16410	16410	16800	16800		77040
Avg.	10580	16440	16440	16800	16800		77055

Validation Test Truck Run Set - Post

Measured By: _____

Verified By: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26
	SPS WIM ID: 260100
	DATE (mm/dd/yyyy) 5/11/2011

CALIBRATION TEST TRUCK - Secondary

PART A

1. FHWA CLASS: 9 2. Number of axles: 5

3. AXLE WEIGHTS (lbs)

	a. Empty Truck Avg. Axle Weight	b. Pre-test Average Axle Weight	c. Post-Test Avg. Axle Weight	d. Direct or Calculated?
A		11600	11370	Direct
B		14070	14000	Direct
C		14070	14000	Direct
D		13685	13680	Direct
E		13685	13680	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67110
c. Post Test Loaded Weight: 66730
d. Difference Post Test - Pre-Tests: 380

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: Yes
photo: ☒

b. Make: Peterbilt
c. Model: _____

d. Trailer Load Distribution Description:

palletized bagged fertilizer

photo: ☒

e. Tractor Tare weight - _____ - _____
f. Trailer Tare weight - _____ - _____
g. Axle Spacing - (feet and tenths)

A to B 20.0 B to C 4.2 C to D 35.3 D to E 4.0 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 63.5
i. Kingpin offset from Axle B (units) 1.6 photo: ☐
j. Overall Length - ☒ Measured 74.2

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Secondary

6. SUSPENSION

	a. Tire size	b.Suspension description (leaf, air # of leaves, taper or flat leaf, etc.)	c. photo
A		steel spring	☒
B		air	☒
C		air	☒
D		air	☒
E		air	☒
F			☐

d. Cold Tire Pressures (psi)- from right to left

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F
	108.7	105.8	108.5	78.9	
130	106.2	109.6	107.9	114.4	
130.7	107.1	107.7	105.6	111.4	
	94	106.9	106.1	104.4	

PART B

Table 1 - Raw Measurements -Platform Scale

Axes	Meas.	Pre-test Weight	Instance	Instance	Post-test weight
A	I				
A+B	II				
A+B+C	III				
A+B+C+D	IV				
A+B+C+D+E(1)	V				
A+B+C+D+E+(F)(1)	VI				
B+C+D+E+(F)	VII				
C+D+E+(F)	VIII				
D+E+(F)	IX				
E+(F)	X				
(F)	XI				
A+B+C+D+E+(F)(2)	XII				

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Secondary

Table 2 - Axle and GVW Computations -Platform Scale Pre-test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 3- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 4- Axle and GVW Computations - Platform Scale - Instance -

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Table 5- Axle and GVW Computations - Platform Scale Post-Test

	1		2		Avg.
Axle A	I	0	VI-VII	0	0
Axle B	II-I	0	VII-VIII	0	0
Axle C	III-II	0	VIII-IX	0	0
Axle D	IV-III	0	IX-X	0	0
Axle E	V-IV	0	X-XI	0	0
Axle F	VI-V		XI		
GVW	VI	0	XII	0	0

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/11/2011
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CALIBRATION TEST TRUCK - Secondary

Table 6 - Raw Data -Axle Scales - Pre-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	11580	14080	14080	13680	13680		67100
2	11620	14060	14060	13690	13690		67120
Avg.	11600	14070	14070	13685	13685		67110

Table 7- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 8- Raw Data- Axle scales -

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
Avg.							

Table 9 - Raw Data -Axle Scales - Post-test

Pass	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW
1	11420	13980	13980	13680	13680		66740
2	11320	14020	14020	13680	13680		66720
Avg.	11370	14000	14000	13680	13680		66730

Validation Test Truck Run Set - Post

Measured By: _____

Verified By: _____

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 26 SPS WIM ID: 260100 DATE: (mm/dd/yyyy): 5/10/2011									
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
56.6	52	1	1	8:31:41	2815	51.7	11.1	14.8	15.3	16.5	16.0		73.7	20.4	4.5	34.3	4.1		63.3	73.9
56.6	55	2	1	8:31:59	2818	55.8	11.1	14.0	13.7	9.6	17.0		65.3	20.0	4.3	35.4	4.0		63.7	73.5
56.4	56	1	2	8:42:15	2962	56.6	10.6	16.3	15.5	16.4	15.6		74.5	20.4	4.5	34.4	4.1		63.4	74.7
56.4	60	2	2	8:42:37	2964	60.6	10.5	13.1	13.4	10.0	16.0		63.0	20.1	4.3	35.6	4.0		64.0	73.6
56.0	61.3	1	3	8:52:49	3116	61.3	10.2	15.9	16.6	16.5	16.1		75.4	20.4	4.4	34.2	4.0		63.0	74.0
56.0	65	2	3	8:53:17	3123	65.0	10.9	13.1	12.8	9.4	15.9		62.2	20.0	4.3	35.3	4.0		63.6	73.2
57.2	51	1	4	9:03:13	3271	52.3	10.4	15.9	16.3	16.0	16.7		75.3	20.5	4.5	34.4	4.0		63.4	74.8
57.2	55.5	2	4	9:03:42	3279	55.5	11.3	13.9	13.8	9.8	16.6		65.3	20.1	4.3	35.6	4.1		64.1	73.5
57.2	59.9	1	5	9:14:13	3428	59.9	10.4	16.2	15.4	16.2	15.8		73.9	20.4	4.5	34.4	4.1		63.4	74.8
57.2	60.5	2	5	9:14:17	3429	60.5	11.2	13.9	13.9	10.2	15.6		64.6	20.1	4.3	35.5	4.0		63.9	75.1
57.3	63	1	6	9:24:31	3563	64.3	10.3	16.4	15.7	15.8	16.1		74.5	20.4	4.5	34.4	4.0		63.3	75.2
57.3	64	2	6	9:24:38	3567	65.1	10.7	13.3	14.2	10.3	15.3		63.8	20.0	4.3	35.5	4.1		63.9	73.3
58.0	56	1	7	9:34:50	3691	56.2	10.6	16.0	15.7	16.5	16.5		75.3	20.4	4.5	34.4	4.1		63.4	74.1
58.0	55	2	7	9:35:16	3697	55.8	11.0	13.9	14.0	9.6	17.1		65.6	20.1	4.3	35.6	4.0		64.0	74.4
65.9	58	1	8	10:26:39	4446	60.5	10.7	16.3	15.8	16.6	16.1		75.5	20.5	4.5	34.5	4.1		63.6	76.2
65.9	60	2	8	10:26:58	4456	60.0	10.7	14.2	13.7	12.8	11.8		63.2	19.9	4.3	35.2	4.1		63.5	73.8
66.1	64	1	9	10:37:15	4589	64.1	10.5	16.3	15.8	15.9	16.1		74.6	20.5	4.5	34.4	4.1		63.5	75.4
66.1	65	2	9	10:37:27	4592	65.4	10.9	14.0	13.8	12.9	13.3		64.9	20.1	4.4	35.5	4.1		64.1	73.7
66.3	54	1	10	10:47:43	4726	56.5	10.5	15.9	15.4	16.2	16.3		74.2	20.5	4.5	34.4	4.0		63.4	74.4
66.3	55	2	10	10:47:58	4730	54.7	10.9	13.7	13.5	12.6	12.3		63.1	20.0	4.3	35.2	4.1		63.6	72.9
69.3	57	1	11	10:58:47	4871	58.0	10.3	15.6	15.3	16.4	16.0		73.4	20.5	4.5	34.4	4.1		63.5	75.2
69.3	55	2	11	10:58:51	4872	54.8	10.9	13.8	13.4	13.6	14.1		65.6	20.0	4.3	35.4	4.1		63.8	73.9
72.1	60	1	12	11:09:33	5028	59.9	10.7	16.7	15.9	16.7	16.5		76.3	20.5	4.5	34.4	4.1		63.5	75.3
72.1	60	2	12	11:09:58	5037	60.9	10.6	13.6	13.7	13.1	13.4		64.6	20.1	4.3	35.4	4.1		63.9	73.4

Recorded By: _____ kt	Verified By: _____ djw	Run Set _____ Pre _____
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Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS							STATE CODE: 26 SPS WIM ID: 260100 DATE: (mm/dd/yyyy): 5/10/2011														
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
75.4	59	1	13	11:19:43	5150	60.8	10.4	16.3	15.9	16.2	16.4		75.1	20.4	4.5	34.3	4.0		63.2	74.8
75.4	65	2	13	11:19:45	5151	65.7	11.0	13.6	13.8	13.0	12.7		64.0	20.1	4.3	35.4	4.1		63.9	73.4
76.9	56	1	14	11:31:06	5310	57.3	10.3	15.8	16.1	15.7	16.5		74.3	20.4	4.5	34.4	4.0		63.3	75.2
76.9	55	2	14	11:31:28	5319	55.2	10.3	14.2	13.2	13.9	11.6		63.1	20.0	4.3	35.4	4.1		63.8	73.6
83.1	58	1	15	12:33:25	6200	60.3	10.5	16.2	16.0	16.5	16.3		75.4	20.4	4.5	34.4	4.1		63.4	75.3
83.1	58	2	15	12:39:39	6284	59.7	10.9	14.1	13.3	13.1	13.2		64.7	20.0	4.4	35.3	4.1		63.8	74.0
84.3	64	1	16	12:50:31	6454	64.2	10.4	17.2	16.2	16.5	16.8		77.0	20.4	4.5	34.4	4.0		63.3	74.4
84.3	64	2	16	12:50:34	6455	65.3	10.5	14.1	13.6	12.7	14.3		65.1	20.0	4.3	35.3	4.1		63.7	73.5
85.5	56	1	17	13:01:32	6592	58.2	10.5	16.0	16.1	16.7	16.8		76.1	20.4	4.5	34.3	4.0		63.2	74.9
85.5	54	2	17	13:01:52	6598	54.9	11.1	13.9	13.4	13.0	14.1		65.6	20.0	4.3	35.3	4.1		63.7	73.6
86.0	61	1	18	13:14:20	6759	61.8	10.7	15.9	16.5	17.4	16.7		77.2	20.5	4.5	34.4	4.1		63.5	75.7
86.9	64	1	19	13:24:29	6890	63.9	10.6	17.2	17.3	16.9	16.7		78.6	20.3	4.4	34.3	4.0		63.0	74.7
86.9	64	2	18	13:24:46	6892	65.5	10.9	14.3	14.3	13.7	12.5		65.7	20.0	4.3	35.3	4.1		63.7	73.8
86.9	61	1	20	13:34:50	7022	61.3	10.6	16.5	16.2	17.4	16.9		77.6	20.5	4.5	34.3	4.0		63.3	75.1
86.9	55	2	19	13:35:47	7038	55.3	10.9	13.6	13.5	13.3	14.3		65.5	20.0	4.3	35.3	4.2		63.8	74.2
86.6	64	1	21	13:47:05	7205	64.3	10.3	16.2	16.6	16.3	15.4		74.7	20.4	4.5	34.3	4.0		63.2	74.6
86.6	59	2	20	13:47:21	7207	60.0	11.0	14.0	13.6	13.1	13.2		64.9	20.0	4.3	35.4	4.1		63.8	73.3

Recorded By: _____ kt	Verified By: _____ djw	Run Set _____ Pre
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Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 26 SPS WIM ID: 260100 DATE: (mm/dd/yyyy): 5/11/2011									
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
60.7	55	1	1	7:54:44	2519	56.4	10.3	15.8	15.6	16.5	16.3		74.5	20.4	4.5	34.4	4.1		63.4	75.0
60.7	54	2	1	7:55:08	2525	55.7	11.2	13.5	13.5	13.0	14.3		65.5	20.0	4.3	35.4	4.1		63.8	73.9
62.1	60	1	2	8:06:13	2708	60.6	10.8	15.6	16.2	16.7	16.4		75.6	20.4	4.4	34.3	4.0		63.1	74.7
62.1	59	2	2	8:06:39	2719	59.8	11.5	13.8	13.7	13.0	12.6		64.5	20.0	4.3	35.4	4.1		63.8	74.8
63.6	63	1	3	8:16:40	2896	63.9	10.5	16.6	16.6	16.2	16.6		76.7	20.4	4.5	34.3	4.0		63.2	74.8
63.6	65	2	3	8:17:04	2906	64.9	11.2	13.9	13.9	13.0	12.3		64.2	19.9	4.3	35.3	4.1		63.6	73.8
64.5	54	1	4	8:27:26	3066	56.0	10.7	15.8	15.5	16.6	16.6		75.2	20.4	4.5	34.3	4.0		63.2	74.9
64.9	59	1	5	8:39:21	3247	60.8	10.7	16.1	16.1	16.9	16.5		76.2	20.4	4.4	34.3	4.1		63.2	74.6
64.9	59	2	4	8:39:34	3249	60.2	11.4	14.3	13.7	13.0	12.9		65.2	20.0	4.3	35.5	4.1		63.9	73.6
65.8	63	1	6	8:49:21	3397	63.8	10.3	16.0	16.7	16.5	16.5		75.8	20.4	4.5	34.3	4.0		63.2	74.7
65.8	64	2	5	8:49:53	3408	64.7	11.2	13.7	14.0	12.6	12.5		64.0	19.9	4.3	35.2	4.1		63.5	73.5
66.9	54	1	7	9:00:08	3573	56.3	10.7	15.8	15.7	16.8	16.4		75.4	20.5	4.5	34.4	4.1		63.5	74.9
66.9	55	2	6	9:00:16	3576	55.4	10.8	14.1	13.1	13.5	12.8		64.3	20.0	4.4	35.3	4.2		63.9	74.0
72.4	59	1	8	9:35:37	4082	60.1	11.1	16.2	15.8	17.0	16.7		76.8	20.3	4.4	34.1	4.1		62.9	74.1
72.4	58	2	7	9:35:46	4087	60.4	10.7	13.6	13.7	12.8	13.2		63.9	20.0	4.3	35.3	4.1		63.7	73.4
74.4	64	1	9	9:46:07	4229	63.7	10.6	16.1	16.1	15.9	16.6		75.3	20.4	4.4	34.3	4.0		63.1	75.1
74.4	65	2	8	9:46:09	4230	65.5	11.0	13.7	13.6	13.3	12.5		64.1	20.0	4.3	35.4	4.1		63.8	74.0
75.5	54	1	10	9:57:18	4386	56.3	10.9	15.7	16.2	16.9	16.6		76.4	20.4	4.4	34.3	4.1		63.2	75.3
75.5	59	2	9	9:57:26	4391	59.8	11.3	13.9	13.5	13.2	14.3		66.2	20.0	4.3	35.3	4.1		63.7	73.7
77.2	59	1	11	10:08:06	4544	59.9	10.9	16.6	15.6	17.3	17.1		77.5	20.4	4.5	34.2	4.1		63.2	75.0
77.2	63	2	10	10:08:51	4559	65.0	11.2	13.9	13.4	13.1	14.2		66.0	20.0	4.3	35.3	4.1		63.7	73.3
78.3	63	1	12	10:19:10	4701	63.6	10.8	16.2	16.5	16.6	16.1		76.1	20.3	4.5	34.1	4.1		63.0	73.8
78.3	63	2	11	10:19:41	4713	65.0	11.2	13.7	13.6	12.6	12.3		63.4	19.9	4.3	35.3	4.1		63.6	73.9
80.2	56	1	13	10:32:05	4878	56.2	10.5	16.3	15.8	16.6	16.7		75.9	20.3	4.5	34.2	4.0		63.0	74.8

Recorded By: _____ kt	Verified By: _____ djw	Run Set _____ Post _____
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Traffic Sheet 21 (Wheel Load) LTTP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS							STATE CODE: 26 SPS WIM ID: 260100 DATE: (mm/dd/yyyy): 5/11/2011														
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Pvmt Temp	Radar speed	Truck	Pass	Time	Record No.	WIM Speed	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	GVW	A-B space	B-C space	C-D space	D - E space	E - F space	Axle Length	Overall Length
80.2	56	2	12	10:32:44	4891	55.7	11.0	13.5	13.8	13.9	13.4		65.7	20.0	4.3	35.3	4.1		63.7	73.9
82.4	60	1	14	10:42:11	5028	60.8	10.5	16.5	15.8	17.5	16.8		77.1	20.4	4.5	34.2	4.1		63.2	74.5
82.4	57	2	13	10:43:11	5049	60.2	10.6	14.3	13.7	13.2	13.3		65.1	20.0	4.3	35.3	4.1		63.7	73.2
83.2	63	1	15	10:52:33	5197	63.7	10.4	16.4	16.6	16.4	16.0		75.7	20.3	4.4	34.2	4.0		62.9	74.0
83.2	65	2	14	10:52:56	5206	65.2	10.8	13.8	13.9	13.3	12.7		64.5	20.0	4.3	35.4	4.1		63.8	73.6
85.6	55	1	16	11:03:24	5355	55.8	10.6	16.5	16.7	16.7	16.4		76.8	20.3	4.4	34.2	4.0		62.9	74.7
85.6	54	2	15	11:03:55	5363	55.4	11.3	13.7	13.7	13.5	14.6		66.8	20.0	4.3	35.3	4.1		63.7	73.5
86.9	61	1	17	11:15:05	5516	60.8	10.4	16.3	16.3	16.8	16.7		76.5	20.3	4.4	34.2	4.0		62.9	74.0
86.9	59	2	16	11:15:11	5518	59.9	10.7	13.8	13.9	13.2	11.4		62.9	20.0	4.3	35.2	4.1		63.6	72.8
88.3	64	1	18	11:26:44	5685	64.2	10.7	16.5	17.0	16.6	15.7		76.5	20.4	4.4	34.3	4.0		63.1	74.6
88.3	64	2	17	11:27:10	5688	64.9	11.4	14.2	13.9	13.5	12.9		65.8	19.9	4.3	35.3	4.1		63.6	73.8
88.9	56	1	19	11:38:11	5851	56.1	10.6	15.8	16.2	16.8	16.7		76.2	20.4	4.5	34.2	4.1		63.2	76.0
88.9	54	2	18	11:38:41	5861	55.7	11.0	14.0	13.6	13.8	13.0		65.4	20.1	4.3	35.4	4.2		64.0	73.5
90.9	59	1	20	11:49:06	5994	60.6	10.4	16.2	16.2	16.2	16.8		75.9	20.4	4.5	34.4	4.0		63.3	74.3
90.9	59	2	19	11:49:25	5999	60.1	11.2	13.9	13.4	13.1	14.4		66.0	20.0	4.3	35.4	4.1		63.8	74.6
90.9	62	1	21	12:02:48	6211	64.0	10.3	16.2	16.0	16.3	16.3		75.2	20.3	4.4	34.2	4.0		62.9	74.9
90.9	62	2	20	12:03:01	6219	65.3	11.1	13.7	13.8	11.0	10.4		59.9	20.0	4.3	35.4	4.1		63.8	73.1

Recorded By: _____ kt	Verified By: _____ djw	Run Set _____ Post _____
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Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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SITE EQUIPMENT INFORMATION

1. TYPE OF EQUIPMENT BOTH
2. LANE NUMBER ON SITE 4 3. DIRECTION ON SITE south
4. VENDOR IRD MODEL DAW SERIAL# HPR-3659
5. WEIGHING SENSOR TYPE quartz
6. SYSTEM SOFTWARE VERSIONS:
- | | |
|---------------------|-----------------------------|
| CPU | <u>V53</u> |
| LOOP | <u> </u> |
| PIEZO | <u> </u> |
| WEIGHTPAD/ LOADCELL | <u> </u> |
| COMMUNICATIONS | <u> </u> |
7. CLASSIFICATION VIDEO:
- | | |
|--|---------------------------------|
| TIME FROM: <u> </u> | TO: <u> </u> |
| TIME FROM: <u> </u> | TO: <u> </u> |

SITE CONDITIONS

8. PAVEMENT:

Indicate any deficiencies that may affect the performance of the WIM system. List all photos on Sheet 24 that support the evaluation.

There are no pavement distresses that appear to affect the truck dynamics or the WIM system accuracies.

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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9. IN ROAD SENSORS:

Describe any deficiencies regarding the sensor installation. Indicate sensors that show any signs of being broken, severely worn, missing, removed, or loose. List photos on Sheet 24 for

all sensors installed in the pavement are secure, with no notable signs of wear. A WIM sensor has been removed and the recess filled with asphalt, but it needs to be patched.

TRUCK OBSERVATIONS

- 10.** Indicate any irregular truck behaviors such as bouncing, swerving, or braking near the weighing area (within 40 meters). Note the distance from the weighing sensors.

A visual observation of the trucks as they approach, traverse, and leave the sensor area did not indicate any dynamics that would affect the accuracy of the WIM system. The trucks appear to track down the center of the lane.

Minimum 15 minute or 35 truck sample video sample for pavement interaction deficiencies:

Tape Filename: _____
Time: From: _____ To: _____

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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11. CLASSIFICATION VERIFICATION VIDEO:

TAPE 1- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

TAPE 2- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

TAPE 3- NAME: _____

Interval	Filename	From	To
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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SYSTEM ACCURACY TESTS

12. CONDUCT THE FOLLOWING SYSTEM ACCURACY TESTS EITHER ON- SITE OR IN OFFICE

Speed Accuracy - Complete Sheet 20 and attach.

Average radar speed	<u>58.7</u> mph	Average WIM Speed	<u>59.4</u> mph
Mean Difference	<u>0.8</u> mph	SD of mean	<u>1.0</u>

Posted Speed Limit	<u>60</u> mph		
Speed Range	15th percentile - <u>58</u> mph	85th percentile-	<u>65</u> mph

Spacing and Weight - Complete Sheet 21 and attach.

Average distance between axles of drive tandem		<u> </u> feet	
% error from 4.25 ft (industry average)	OR	<u>4.40</u>	ft (WIM system average)
= <u>3.6</u> %			

Average front axle weight for Class 9 vehicles		<u> </u> lbs	
% error from 10.3 kips (industry average) OR		<u>10.7</u>	lbs (known site value)
= <u>3.7</u> %			

SUPPORT EQUIPMENT STRUCTURES

17. Indicate any deficiencies with any site equipment other than the in-road sensors. List all photos on the Sheet 24 for each occurrence.

Cabinet/Foundation None ☒

no cabinet or foundation deficiencies

Pull Boxes None ☒

no pull box deficiencies

Mast None ☒

no service mast deficiencies

Solar Panels None ☒

no solar panel deficiencies

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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Telephone D-Mark Box None ☒

no telephone d-mark box deficiencies

Power Service Box None ☒

no power service box deficiencies

Grounding None ☒

no grounding deficiencies

Conduit None ☒

no conduit deficiencies

STATIC AND DYNAMIC ELECTRONIC EQUIPMENT TESTS

18. Complete and attach a Sheet 22 addendum applicable to the installed road equipment.

ADDITIONAL COMMENTS

All values for the WIM sensors and inductive loops were within tolerances. Electronic tests of the power and communication devices indicated that they were operating normally.

Assessor Dean J. Wolf

Traffic Sheet 22 Addendum - Kistler Quartz LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 26 SPS WIM ID: 260100 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 5/10/2011
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STATIC EQUIPMENT VALUES (SYSTEM OFF)

1. POWER

a. Solar Panel		WATTS		VDC
b. Equipment Power	123.3	VAC		VDC
c. Battery 1		VDC		
d. Battery 2		VDC		
e. Regulated		VDC		
f. Power Supply		VDC		VDC
g. System Input	123.3	VAC		VDC
h. Modem Power	123.3	VAC		VDC
i. Telephone	52.7	VDC		

2. LOOP SENSORS

	Resistance	Inductance	Shield
a. Leading	0.4 Ω	126.8 μh	inf MΩ
b. Trailing	Ω	μh	MΩ

3. KISTLER SENSORS

	Resistance	Capacitance
a. K1 (lead/left)	10 ¹¹ Ω	5.7 ηf
b. K2 (lead/middle)	Ω	ηf
c. K3 (lead mid/right)	Ω	ηf
d. K4 (lead/right)	10 ¹¹ Ω	5.5 ηf
e. K5 (trail/left)	10 ¹⁰ Ω	5.9 ηf
f. K6 (trail/mid left)	Ω	ηf
g. K7 (trail/mid right)	Ω	ηf
h. K8 (trail/right)	10 ¹¹ Ω	5.4 ηf

DYNAMIC EQUIPMENT VALUES (SYSTEM ON)

4. LOOP SENSORS

	Frequency
a. Leading	153.7 KHz
b. Trailing	KHz

5. KISTLER SENSORS

Dynamic testing for the Kistler Quartz sensor is not recommended.

Assessor _____ Dean J. Wolf

Traffic Sheet 24A LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Equipment	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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Item	Description	Filename
1	Power Source	260100_power_service_box_05_10_11.jpg
2	Telephone Source	260100_telephone_pedestal_05_10_11.jpg
3	Cabinet Exterior	260100_cabinet_exterior_05_10_11.jpg
4	Cabinet Interior	260100_cabinet_interior_front_05_10_11.jpg
5	Leading weight sensor	260100_leading_WIM_sensor_05_10_11.jpg
6	Trailing weight sensor	260100_trailing_WIM_sensor_05_10_11.jpg
7	Leading classification sensor	
8	Trailing classification sensor	
9	Leading loop sensor	260100_loop_sensor_05_10_11.jpg
10	Trailing loop sensor	
11	Downstream from site	260100_downstream_05_10_11.jpg
12	Upstream from site	260100_upstream_05_10_11.jpg
13	Cabinet Interior - Rear	
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

RECORDED BY: _____ Dean J. Wolf

Traffic Sheet 24B LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Test Trucks	STATE CODE: 26 SPS WIM ID: 260100 DATE (mm/dd/yyyy) 5/10/2011
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Item	Description	Filename
1	Tractor, Truck #1	260100_Truck_1_Tractor_05_10_11.jpg
2	Trailer/Load, Truck #1	260100_Truck_1_Trailer_05_10_11.jpg
3	Kingpin Offset, Truck #1	
4	Suspension A, Truck #1	260100_Truck_1_Suspension_1_05_10_11.jpg
5	Suspension B, Truck #1	260100_Truck_1_Suspension_2_05_10_11.jpg
6	Suspension C, Truck #1	260100_Truck_1_Suspension_3_05_10_11.jpg
7	Suspension D, Truck #1	260100_Truck_1_Suspension_4_05_10_11.jpg
8	Suspension E, Truck #1	260100_Truck_1_Suspension_5_05_10_11.jpg
9	Suspension F, Truck #1	
10	Tractor, Truck #2	260100_Truck_2_Tractor_05_10_11.jpg
11	Trailer/Load, Truck #2	260100_Truck_2_Trailer_05_10_11.jpg
12	Kingpin Offset, Truck #2	
13	Suspension A, Truck #2	260100_Truck_2_Suspension_1_05_10_11.jpg
14	Suspension B, Truck #2	260100_Truck_2_Suspension_2_05_10_11.jpg
15	Suspension C, Truck #2	260100_Truck_2_Suspension_3_05_10_11.jpg
16	Suspension D, Truck #2	260100_Truck_2_Suspension_4_05_10_11.jpg
17	Suspension E, Truck #2	260100_Truck_2_Suspension_5_05_10_11.jpg
18	Suspension F, Truck #2	
19	Tractor, Truck #3	
20	Trailer/Load, Truck #3	
21	Kingpin Offset, Truck #3	
22	Suspension A, Truck #3	
23	Suspension B, Truck #3	
24	Suspension C, Truck #3	
25	Suspension D, Truck #3	
26	Suspension E, Truck #3	
27	Suspension F, Truck #3	
28	Scale	
29		
30		

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