

WIM System Field Calibration and Validation Handout Guide

Arizona SPS-2
SHRP ID – 040200

Validation Date: January 23, 2013



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1 Site Information

Site ID:	040200	State:	Arizona
LTPP Region:	Western	Configuration:	Loop-2 Bending Plates-Loop
Controller Type:	iSINC	Sensor Type:	Bending Plate
Power:	Solar	Communication:	Cellular
Class Scheme:	LTPP Mar 06	CPU type/setup:	

2 Contact Information

Agency	Contact	Position	Phone	E-mail
FHWA	Debbie Walker	COTR	202-493-3068	deborah.walker@dot.gov
FHWA	Karen King	Division Office	602-382-8965	karen.king@dot.gov
RSC	Kevin Senn	Project Manager	775-329-4955	KSenn@ncenet.com
ADOT	Murari Man Pradhan	LTPP Coordinator	602-712-6574	mpradhan@azdot.gov
ADOT	Mark Catchpole	Traffic Contact	602-712-8596	mcatchpole@azdot.gov
ARA	Dean Wolf	Task Leader	717-512-6638	dwolf@ara.com
ARA	Olga Selezneva	Project Manager	410-540-9949	oselezneva@ara.com
	Scott Sunderland	Truck Vendor	480-641-3500	

3 Schedule of Events

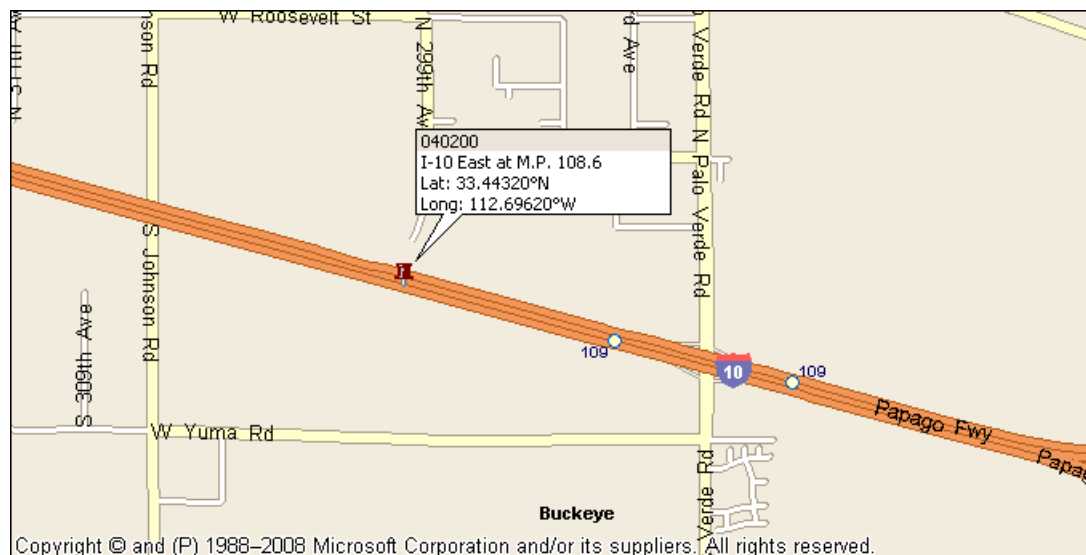
Date	Event	Location	Start Time
1/22/13	Travel	Phoenix, AZ	TBD
1/23/13	Test Truck Weigh/Measure/Inspection	Love's, Buckeye AZ	7:00 am
1/23/13	Equipment Assessment	SPS-2 WIM Site	8:00 am
1/23/13	Initial Performance Evaluation	SPS-2 WIM Site	8:30 am
1/23/13	System Test/Class and Speed Study	SPS-2 WIM Site	TBD
1/24/13	Test Truck Weigh	Love's, Buckeye AZ	7:00 am
1/24/13	Calibration/Validation (if required)	SPS-2 WIM Site	8:00 am
1/25/13	Travel	Camp Hill, PA	TBD

4.1 Airport Location

Name:	Sky Harbor Int'l Airport	Location:	Phoenix, AZ
Latitude:	33.434167°	Longitude:	-112.011667°

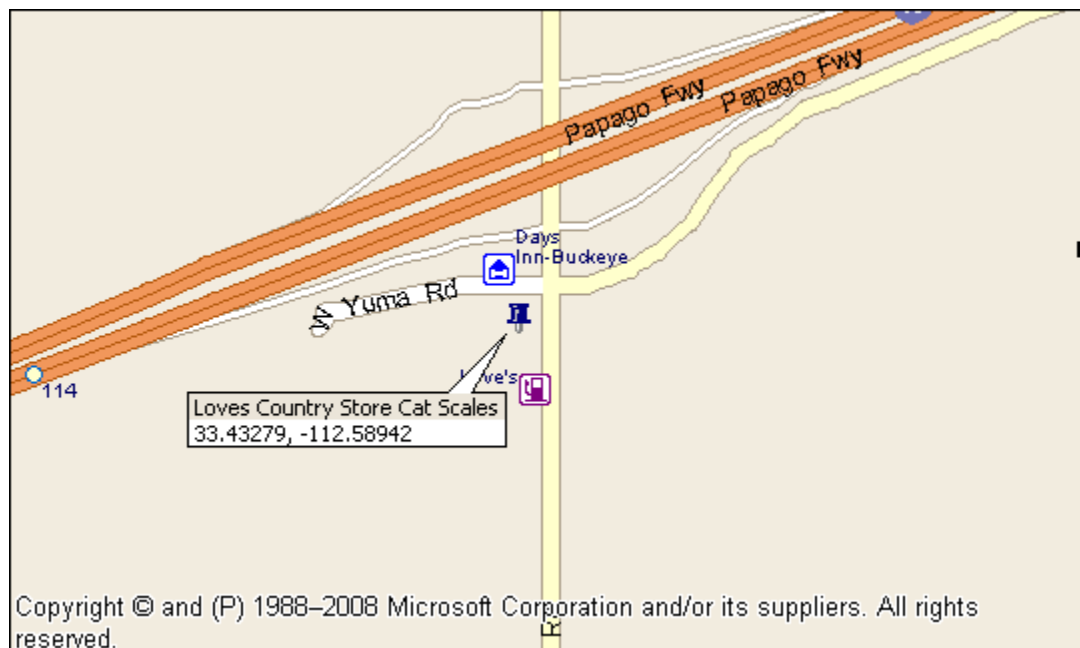


Location:	I-10 East at M.P. 108.6			Direction:	EB
Latitude:	33.442963°	Longitude:	-112.695151°		



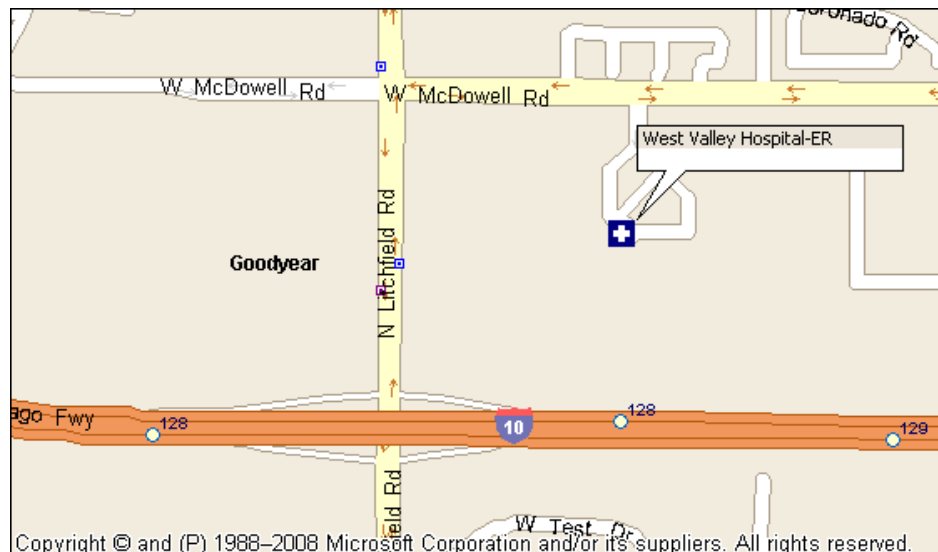
4.3 Truck Scale Location

Name:	Love's Country Store, Buckeye	Location:	I-10 & Exit 114 N Miller Rd
Latitude:	33.43279	Longitude:	-112.58942°



4.4 Hospital Location

Name:	West Valley Hospital and ER		
Phone:	(623) 882-1500	Location:	13677 W. McDowell Rd



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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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10. CABINET LOCATION

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

Cabinet access controlled by: Agency and LTPP
Contact name: Mark Catchpole Phone #
Alternate name: Bryan Knight Phone #

11. POWER

Distance to cabinet from drop: 3 ft
Type: Solar
AC in cabinet? N
Service provider: Phone #

12. TELEPHONE

Distance to cabinet from drop: 0 ft
Type: cellular
Service provider: Phone #

13. SYSTEM

Software and version no. WCU-3
Computer connection: Ethernet

14. TEST TRUCK TURNAROUND TIME

Duration: 15 minutes Distance: 14 miles

15. PHOTOS

	Filename
Power source:	<u>040200_solar_panel_1_23_13.jpg</u>
Phone source:	<u>040200_cell_phone_1_23_13.jpg</u>
Cabinet exterior:	<u>040200_cabinet_exterior_1_23_13.jpg</u>
Cabinet interior:	<u>040200_cabinet_interior_front_1_23_13.jpg</u>
Weight sensors:	<u>040200_leading_WIM_sensor_1_23_13.jpg</u>
	<u>040200_trailing_WIM_sensor_1_23_13.jpg</u>
Other sensors:	<u>040200_leading_loop_1_23_13.jpg</u>
	<u>040200_trailing_loop_1_23_13.jpg</u>
Downstream from sensors on LTPP lane:	<u>040200_downstream_1_23_13.jpg</u>
Upstream from sensors on LTPP lane:	<u>040200_upstream_1_23_13.jpg</u>

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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1. DATA PROCESSING

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

2. EQUIPMENT

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

3. PAVEMENT

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

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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 LTPP

- c. Authorization to calibrate site LTPP

- d. Calibration routine LTPP annually
Other: _____

- e. Test Vehicle Responsibilities

- i. Trucks

1st-	<u>Air suspension 3S2</u>	<u>LTPP</u>
2nd-	<u>Air Suspension 3S2</u>	<u>LTPP</u>
3rd-	_____	_____
4th-	_____	_____

ii. Loads LTPP

iii. Drivers LTPP

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

- g. Access to cabinet Joint

- h. State personel required on site No

- i. Traffic control required No

- J. Enforcement coordination required No

Traffic Sheet 18 LTPP MONITORED TRAFFIC DATA WIM SITE COORDINATION	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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 Roy Czinku Phone # 306-270-9492
Agency IRD
- b. Maintenance (equipment)
Name Roy Czinku Phone # 306-270-9492
Agency IRD
- c. Data Processing and pre-visit data
Name Basel Abukhater Phone # 716-632-0804
Agency Stantec
- d. Construction schedule and verification
Name _____ Phone # _____
Agency _____
- e. Test Vehicles (trucks, loads, drivers)
Name _____ Phone # _____
Agency _____
- f. Traffic control
Name _____ Phone # _____
Agency _____
- g. Enforcement coordination
Name _____ Phone # _____
Agency _____
- h. Nearest static scale
Name _____ Location: _____
Phone: _____

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: <u>04</u> SPS WIM ID: <u>040200</u> DATE (mm/dd/yyyy) <u>1/23/2013</u>
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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		11420	11090	Direct
B		16645	16515	Direct
C		16645	16515	Direct
D		16585	16515	Direct
E		16585	16515	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 77880
c. Post Test Loaded Weight: 77150
d. Difference Post Test - Pre-Tests: -730

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth
c. Model: _____

d. Trailer Load Distribution Description:

Residential trash

photo: ☒

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

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4
i. Kingpin offset from Axle B (units) 1 photo: ☐
j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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	11400	16660	16660	16580	16580		77880
2	11440	16630	16630	16590	16590		77880
Avg.	11420	16645	16645	16585	16585		77880

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	11040	16560	16560	16510	16510		77180
2	11140	16470	16470	16520	16520		77120
Avg.	11090	16515	16515	16515	16515		77150

Validation Test Truck Run Set - Pre

Measured By: Greg Helman

Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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		11050	10750	Direct
B		14255	13990	Direct
C		14255	13990	Direct
D		14320	14345	Direct
E		14320	14345	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 68200
c. Post Test Loaded Weight: 67420
d. Difference Post Test - Pre-Tests: -780

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth
c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

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

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4
i. Kingpin offset from Axle B (units) 2 photo: ☐
j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

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>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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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	11100	14180	14180	14380	14380		68220
2	11000	14330	14330	14260	14260		68180
Avg.	11050	14255	14255	14320	14320		68200

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	10740	14010	14010	14340	14340		67440
2	10760	13970	13970	14350	14350		67400
Avg.	10750	13990	13990	14345	14345		67420

Validation Test Truck Run Set - Pre

Measured By: Greg Helman

Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 04
	SPS WIM ID: 040200
	DATE (mm/dd/yyyy) 1/24/2013

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		11510	0	Direct
B		16550	0	Direct
C		16550	0	Direct
D		16490	0	Direct
E		16490	0	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 77590
c. Post Test Loaded Weight: 0
d. Difference Post Test - Pre-Tests: -77590

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth

c. Model: _____

d. Trailer Load Distribution Description:

Residential trash

photo: ☒

e. Tractor Tare weight - _____ - _____

f. Trailer Tare weight - _____ - _____

g. Axle Spacing - (feet and tenths)

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4

i. Kingpin offset from Axle B (units) 1 photo: ☐

j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11520	16550	16550	16490	16490		77600
2	11500	16550	16550	16490	16490		77580
Avg.	11510	16550	16550	16490	16490		77590

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
Avg.							

Validation Test Truck Run Set - Cal 1

Measured By: Greg Helman
Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 04
	SPS WIM ID: 040200
	DATE (mm/dd/yyyy) 1/24/2013

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		11080	0	Direct
B		14060	0	Direct
C		14060	0	Direct
D		14315	0	Direct
E		14315	0	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67830
c. Post Test Loaded Weight: 0
d. Difference Post Test - Pre-Tests: -67830

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth

c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

e. Tractor Tare weight - _____ - _____

f. Trailer Tare weight - _____ - _____

g. Axle Spacing - (feet and tenths)

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4

i. Kingpin offset from Axle B (units) 2 photo: ☐

j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

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>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11080	14060	14060	14310	14310		67820
2	11080	14060	14060	14320	14320		67840
Avg.	11080	14060	14060	14315	14315		67830

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
Avg.							

Validation Test Truck Run Set - Cal 1

Measured By: Greg Helman
Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 1	STATE CODE: 04
	SPS WIM ID: 040200
	DATE (mm/dd/yyyy) 1/24/2013

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		11510	11110	Direct
B		16550	16430	Direct
C		16550	16430	Direct
D		16490	16410	Direct
E		16490	16410	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 77590
c. Post Test Loaded Weight: 76790
d. Difference Post Test - Pre-Tests: -800

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth
c. Model: _____

d. Trailer Load Distribution Description:

Residential trash

photo: ☒

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

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4
i. Kingpin offset from Axle B (units) 1 photo: ☐
j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>1</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	AxleD	AxleE	Axle F

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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11520	16550	16550	16490	16490		77600
2	11500	16550	16550	16490	16490		77580
Avg.	11510	16550	16550	16490	16490		77590

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	11140	16420	16420	16410	16410		76800
2	11080	16440	16440	16410	16410		76780
Avg.	11110	16430	16430	16410	16410		76790

Validation Test Truck Run Set - Post

Measured By: Greg Helman

Verified By: Dean J. Wolf

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # 2	STATE CODE: 04
	SPS WIM ID: 040200
	DATE (mm/dd/yyyy) 1/24/2013

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		11080	10690	Direct
B		14060	13955	Direct
C		14060	13955	Direct
D		14315	14225	Direct
E		14315	14225	Direct
F				

4. GVW (same units as axles)

a. Empty GVW: _____
b. Average Pre-Test Loaded weight: 67830
c. Post Test Loaded Weight: 67050
d. Difference Post Test - Pre-Tests: -780

5. TRUCK DESCRIPTION

a. Tractor Cab Style: Conventional Sleeper Cab: No
photo: ☒

b. Make: Kenworth

c. Model: _____

d. Trailer Load Distribution Description:

photo: ☒

e. Tractor Tare weight - _____ - _____

f. Trailer Tare weight - _____ - _____

g. Axle Spacing - (feet and tenths)

A to B 14.5 B to C 4.3 C to D 33.5 D to E 4.1 E to F _____

h. Wheelbase - ☐ Measured _____ ☒ Computed 56.4

i. Kingpin offset from Axle B (units) 2 photo: ☐

j. Overall Length - ☒ Measured 63.5

Traffic Sheet 19 LTPP MONITORED TRAFFIC DATA CALIBRATION TEST TRUCK # <u>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11R22.5	steel spring	☒
B	11R22.5	air	☒
C	11R22.5	air	☒
D	11R22.5	air	☒
E	11R22.5	air	☒
F			☐

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

Steering Axle	Axle B	Axle C	Axle D	Axle E	Axle F

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>2</u>	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/24/2013
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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	11080	14060	14060	14310	14310		67820
2	11080	14060	14060	14320	14320		67840
Avg.	11080	14060	14060	14315	14315		67830

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	10660	13990	13990	14210	14210		67060
2	10720	13920	13920	14240	14240		67040
Avg.	10690	13955	13955	14225	14225		67050

Validation Test Truck Run Set - Post

Measured By: Greg Helman

Verified By: Dean J. Wolf

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 04 SPS WIM ID: 040200 DATE: (mm/dd/yyyy): 1/23/2013									
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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
44.6	54	2	1	8:40:05	8589	54.0	11.8	16.4	15.7	16.3	16.0		76.2	14.2	4.3	33.2	4.0		55.7	61.0
44.6	54	1	1	8:40:09	8590	52.0	12.5	19.3	18.6	18.2	18.7		87.2	14.3	4.3	32.9	4.0		55.5	61.0
47.5	64	2	2	8:55:09	8676	62.0	10.9	15.7	14.8	15.0	15.4		71.8	14.3	4.3	32.7	3.9		55.2	61.0
47.5	64	1	2	8:55:13	8677	62.0	11.9	18.1	17.2	17.0	17.5		81.7	14.3	4.3	32.9	4.0		55.5	60.0
52.2	63	2	3	9:39:54	8916	63.0	12.6	16.3	15.6	16.2	16.5		77.0	14.4	4.3	33.0	3.9		55.6	61.0
52.2	63	1	3	9:39:57	8917	63.0	11.9	18.5	18.1	17.3	17.0		82.9	14.3	4.3	33.0	4.1		55.7	61.0
54.0	72	2	4	9:54:50	9011	70.0	10.2	14.5	13.6	13.9	14.7		66.8	14.3	4.3	32.9	4.1		55.6	61.0
54.0	72	1	4	9:54:51	9012	72.0	10.6	16.0	15.2	16.0	15.2		73.0	14.3	4.3	32.8	4.1		55.5	60.0
56.2	69	2	5	10:09:52	9102	69.0	10.1	12.8	12.8	14.0	13.2		62.8	14.2	4.4	32.8	4.1		55.5	61.0
56.2	71	1	5	10:10:03	9104	71.0	10.7	16.0	15.2	15.9	15.6		73.4	14.3	4.3	32.8	4.2		55.6	61.0
56.6	73	2	6	10:24:12	9193	72.0	11.5	15.2	14.9	15.2	15.5		72.4	14.4	4.3	33.2	4.0		55.9	61.0
56.6	72	1	6	10:24:34	9195	72.0	10.8	16.6	15.7	15.7	15.7		74.5	14.3	4.3	32.8	4.0		55.4	61.0
61.7	53	2	7	10:38:40	9283	53.0	11.7	17.0	16.5	16.4	16.8		78.5	14.2	4.3	32.9	4.1		55.5	61.0
61.7	54	1	7	10:38:43	9284	53.0	12.1	19.1	18.5	18.2	18.3		86.3	14.3	4.3	32.8	4.0		55.4	61.0
63.5	62	2	8	10:53:51	9378	62.0	11.0	15.1	15.1	14.3	15.1		70.8	14.3	4.3	32.9	4.0		55.5	61.0
63.5	63	1	8	10:53:54	9379	63.0	11.9	17.8	17.5	16.5	17.2		80.8	14.3	4.3	32.9	4.0		55.5	61.0
65.6	53	2	9	11:08:27	9479	53.0	11.4	16.3	15.5	15.7	16.0		74.9	14.2	4.3	33.3	4.0		55.8	61.0
65.6	52	1	9	11:08:30	9480	53.0	12.4	18.3	17.6	17.8	18.3		84.5	14.3	4.3	33.1	4.0		55.7	61.0
62.5	62	2	10	11:22:45	9566	63.0	11.9	15.4	14.9	14.9	14.8		71.9	14.3	4.3	32.9	3.9		55.4	61.0
62.5	63	1	10	11:22:49	9567	63.0	11.6	17.3	17.2	16.1	16.2		78.3	14.2	4.3	32.7	4.0		55.2	60.0
68.8	71	2	11	11:57:39	9791	72.0	10.8	14.0	13.6	13.0	14.1		65.4	14.2	4.4	32.8	4.1		55.5	61.0
68.8	72	1	11	11:57:54	9793	72.0	10.9	16.2	15.0	15.6	15.5		73.2	14.2	4.3	32.8	4.1		55.4	60.0
71.9	54	2	12	12:11:41	9875	53.0	13.1	17.9	17.3	17.1	17.3		82.6	14.5	4.3	33.2	3.9		55.9	61.0
71.9	54	1	12	12:11:45	9876	54.0	13.3	19.8	19.1	18.7	18.9		89.9	14.4	4.3	33.2	4.0		55.9	61.0

Recorded By: gh

Verified By: djw

Run Set Pre

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 04 SPS WIM ID: 040200 DATE: (mm/dd/yyyy): 1/23/2013									
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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
68.6	64	2	13	12:25:30	9956	63.0	11.5	16.2	16.4	15.3	15.6		75.2	14.3	4.3	33.0	4.0		55.6	61.0
68.6	64	1	13	12:25:34	9957	63.0	11.8	18.4	18.1	17.2	17.3		82.6	14.3	4.3	32.9	4.1		55.6	61.0
74.7	72	2	14	12:40:13	10060	71.0	11.0	15.4	15.1	15.2	14.1		70.8	14.4	4.3	33.2	4.1		56.0	61.0
74.7	73	1	14	12:40:16	10061	73.0	11.1	16.2	16.3	15.8	16.1		75.4	14.3	4.4	33.1	4.1		55.9	61.0
72.2	53	2	15	12:54:43	10172	53.0	12.7	17.6	16.8	17.3	17.3		81.6	14.5	4.3	33.2	4.0		56.0	61.0
72.2	53	1	15	12:54:47	10173	53.0	12.7	19.2	18.5	18.2	18.5		87.0	14.4	4.3	32.9	4.0		55.6	61.0
71.8	72	2	16	13:08:58	10266	68.0	10.6	15.3	14.9	14.4	14.9		70.1	14.4	4.3	33.2	4.0		55.9	61.0
71.8	72	1	16	13:09:01	10267	72.0	11.3	17.0	16.2	16.2	15.8		76.4	14.3	4.3	33.1	4.0		55.7	61.0
72.9	63	2	17	13:22:43	10349	63.0	11.3	15.3	15.0	14.3	14.6		70.5	14.3	4.3	32.9	4.0		55.5	61.0
72.9	63	1	17	13:22:45	10350	64.0	12.7	19.4	18.8	18.0	17.7		86.5	14.4	4.3	33.2	4.1		56.0	61.0
76.8	68	2	18	13:37:44	10452	68.0	10.4	15.2	15.0	15.0	13.7		69.5	14.4	4.3	33.1	4.0		55.8	61.0
76.8	70	1	18	13:37:49	10453	70.0	10.9	17.0	16.3	16.3	16.0		76.5	14.4	4.3	33.1	4.0		55.8	61.0
76.2	54	2	19	13:52:13	10545	54.0	13.1	17.7	17.4	17.8	17.6		83.6	14.4	4.3	33.2	4.0		55.9	61.0
76.2	54	1	19	13:52:16	10546	54.0	13.4	20.5	19.9	18.6	19.3		91.7	14.5	4.4	33.4	4.0		56.3	61.0
75.6	64	2	20	14:05:55	10636	63.0	11.9	16.6	16.4	15.6	16.2		76.6	14.4	4.3	33.1	4.0		55.8	61.0
75.6	64	1	20	14:05:56	10637	63.0	11.4	18.2	17.9	16.6	17.5		81.6	14.3	4.3	33.0	4.0		55.6	61.0

Recorded By: gh

Verified By: djw

Run Set Pre

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 04 SPS WIM ID: 040200 DATE: (mm/dd/yyyy): 1/24/2013									
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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
57.7	52	2	1	8:32:21	16434	53.0	10.8	15.2	14.3	14.4	14.4		69.0	14.4	4.3	33.1	4.0		55.8	64.0
57.7	51	1	1	8:32:39	16436	54.0	11.8	17.2	16.8	15.6	16.3		77.8	14.4	4.3	33.3	4.0		56.0	64.0
56.3	62	2	2	8:49:28	16530	63.0	10.3	13.6	13.5	13.3	13.7		64.4	14.3	4.3	32.9	4.1		55.6	63.0
56.3	63	1	2	8:49:35	16531	64.0	11.4	16.7	16.4	15.8	15.5		76.0	14.4	4.3	33.1	4.0		55.8	63.0
55.8	69	2	3	9:03:46	16609	70.0	10.8	14.9	14.7	14.8	14.0		69.2	14.4	4.3	33.2	4.0		55.9	64.0
55.8	71	1	3	9:03:56	16610	73.0	12.2	18.2	16.7	16.9	16.7		80.7	14.4	4.3	33.2	4.1		56.0	64.0
56.2	53	2	4	9:18:28	16688	53.0	10.6	15.5	14.4	14.6	14.5		69.5	14.5	4.3	33.3	4.0		56.1	64.0
56.2	54	1	4	9:18:32	16689	54.0	10.5	16.1	15.5	15.2	15.6		72.8	14.4	4.3	33.0	4.0		55.7	63.0
56.4	61	2	5	9:33:01	16771	63.0	9.9	14.6	14.3	13.4	13.1		65.3	14.4	4.3	33.1	4.0		55.8	64.0
56.4	60	1	5	9:33:14	16774	63.0	11.2	17.2	16.3	15.7	15.7		76.0	14.4	4.3	33.2	4.1		56.0	64.0
56.2	72	2	6	9:48:01	16853	72.0	10.9	15.0	14.0	14.3	14.0		68.1	14.3	4.3	33.0	4.0		55.6	63.0
56.2	72	1	6	9:48:03	16854	72.0	11.3	16.1	15.5	15.3	15.7		73.9	14.3	4.3	32.9	4.0		55.5	63.0

Recorded By: gah

Verified By: djw

Run Set Cal 1

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 04 SPS WIM ID: 040200 DATE: (mm/dd/yyyy): 1/24/2013									
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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
57.7	52	2	1	8:32:21	16434	53.0	10.8	15.2	14.3	14.4	14.4		69.0	14.4	4.3	33.1	4.0		55.8	64.0
57.7	51	1	1	8:32:39	16436	54.0	11.8	17.2	16.8	15.6	16.3		77.8	14.4	4.3	33.3	4.0		56.0	64.0
56.3	62	2	2	8:49:28	16530	63.0	10.3	13.6	13.5	13.3	13.7		64.4	14.3	4.3	32.9	4.1		55.6	63.0
56.3	63	1	2	8:49:35	16531	64.0	11.4	16.7	16.4	15.8	15.5		76.0	14.4	4.3	33.1	4.0		55.8	63.0
55.8	69	2	3	9:03:46	16609	70.0	10.8	14.9	14.7	14.8	14.0		69.2	14.4	4.3	33.2	4.0		55.9	64.0
55.8	71	1	3	9:03:56	16610	73.0	12.2	18.2	16.7	16.9	16.7		80.7	14.4	4.3	33.2	4.1		56.0	64.0
56.2	53	2	4	9:18:28	16688	53.0	10.6	15.5	14.4	14.6	14.5		69.5	14.5	4.3	33.3	4.0		56.1	64.0
56.2	54	1	4	9:18:32	16689	54.0	10.5	16.1	15.5	15.2	15.6		72.8	14.4	4.3	33.0	4.0		55.7	63.0
56.4	61	2	5	9:33:01	16771	63.0	9.9	14.6	14.3	13.4	13.1		65.3	14.4	4.3	33.1	4.0		55.8	64.0
56.4	60	1	5	9:33:14	16774	63.0	11.2	17.2	16.3	15.7	15.7		76.0	14.4	4.3	33.2	4.1		56.0	64.0
56.2	72	2	6	9:48:01	16853	72.0	10.9	15.0	14.0	14.3	14.0		68.1	14.3	4.3	33.0	4.0		55.6	63.0
56.2	72	1	6	9:48:03	16854	72.0	11.3	16.1	15.5	15.3	15.7		73.9	14.3	4.3	32.9	4.0		55.5	63.0
56.7	54	2	7	10:03:30	16954	54.0	9.6	13.6	13.4	13.9	13.4		63.8	14.3	4.2	32.9	4.1		55.5	64.0
56.7	53	1	7	10:03:34	16955	53.0	11.0	16.3	15.7	15.4	15.9		74.2	14.3	4.3	32.9	4.0		55.5	63.0
57.1	62	2	8	10:18:03	17036	62.0	11.0	14.2	13.8	13.4	13.6		66.2	14.4	4.3	32.9	3.9		55.5	63.0
57.1	62	1	8	10:18:07	17037	63.0	11.1	17.2	16.5	15.6	15.8		76.3	14.4	4.3	33.1	4.0		55.8	63.0
57.5	71	2	9	10:33:12	17115	72.0	10.6	14.9	13.7	14.9	14.9		69.1	14.4	4.3	33.1	4.0		55.8	63.0
58.1	53	2	10	10:48:31	17210	54.0	10.5	15.2	14.7	13.7	14.2		68.2	14.4	4.3	33.1	3.9		55.7	64.0
58.9	63	2	11	11:03:07	17298	63.0	11.1	15.2	14.7	13.9	14.1		69.0	14.5	4.3	33.2	4.0		56.0	64.0
58.9	63	1	9	11:03:11	17299	63.0	11.0	16.3	15.7	14.7	14.5		72.3	14.4	4.3	33.0	4.0		55.7	63.0
59.7	73	2	12	11:18:33	17398	72.0	11.3	15.4	14.9	15.0	14.7		71.2	14.4	4.3	33.2	4.0		55.9	64.0
59.7	64	1	10	11:18:51	17402	65.0	11.9	18.6	17.8	17.1	17.2		82.7	14.5	4.4	33.5	4.1		56.5	64.0
61.3	52	2	13	11:33:45	17507	54.0	10.6	13.8	13.1	14.3	13.9		65.5	14.3	4.3	33.5	4.1		56.2	64.0
61.3	53	1	11	11:33:48	17508	54.0	11.0	16.6	16.2	15.8	15.9		75.6	14.4	4.3	33.1	4.0		55.8	64.0

Recorded By: gah

Verified By: djw

Run Set Post

Traffic Sheet 21 (Wheel Load) LTPP MONITORED TRAFFIC DATA WIM SYSTEM TRUCK RECORDS										STATE CODE: 04 SPS WIM ID: 040200 DATE: (mm/dd/yyyy): 1/24/2013									
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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
60.6	61	2	14	11:48:23	17607	63.0	11.4	15.6	14.9	13.6	14.1		69.5	14.4	4.3	33.2	4.0		55.9	64.0
60.6	63	1	12	11:48:27	17608	64.0	11.4	17.3	17.1	16.1	15.6		77.4	14.4	4.3	33.1	4.0		55.8	64.0
61.4	70	2	15	12:01:54	17698	70.0	10.5	14.3	13.5	14.2	13.6		66.0	14.3	4.3	33.0	4.2		55.8	64.0
61.4	68	1	13	12:02:10	17700	68.0	11.2	17.1	16.7	16.3	16.1		77.6	14.4	4.3	33.2	4.1		56.0	64.0
61.4	54	1	14	12:16:43	17800	54.0	10.6	16.0	15.8	15.6	15.8		73.9	14.3	4.3	32.9	4.0		55.5	63.0
65.6	63	2	16	12:31:25	17901	63.0	9.9	13.2	13.1	12.5	13.7		62.5	14.3	4.3	32.9	4.1		55.6	64.0
65.6	64	1	15	12:31:33	17903	64.0	11.2	17.3	17.1	15.5	15.5		76.6	14.4	4.3	33.1	4.0		55.8	63.0
65.0	71	2	17	12:45:29	17996	71.0	10.0	13.7	13.8	13.7	14.3		65.5	14.3	4.3	33.0	4.2		55.8	64.0
65.1	54	2	18	13:01:26	18101	54.0	11.0	14.7	14.3	14.5	14.6		69.3	14.5	4.3	33.2	3.9		55.9	64.0
65.1	54	1	16	13:02:01	18105	54.0	11.8	17.6	17.2	16.3	17.0		79.8	14.4	4.3	33.3	4.0		56.0	64.0
64.6	63	2	19	13:16:20	18197	63.0	10.6	14.8	14.1	14.5	13.7		67.6	14.4	4.3	33.1	4.0		55.8	64.0
64.6	52	1	17	13:16:43	18202	54.0	11.1	16.8	16.2	15.6	15.9		75.6	14.3	4.3	33.1	4.0		55.7	64.0
63.5	64	1	18	13:30:28	18298	64.0	11.5	17.5	17.3	16.9	17.2		80.6	14.5	4.3	33.3	4.1		56.2	64.0
64.5	54	2	20	13:45:01	18401	54.0	10.0	14.6	13.9	14.8	14.1		67.4	14.3	4.3	33.2	4.1		55.9	64.0
64.5	54	1	19	13:45:04	18402	54.0	10.8	16.7	16.4	15.8	15.8		75.5	14.4	4.3	33.1	4.0		55.8	63.0
63.7	64	2	21	13:59:34	18495	64.0	10.7	14.3	13.6	13.3	13.0		65.0	14.4	4.3	33.1	4.1		55.9	64.0
63.7	64	1	20	13:59:37	18496	65.0	11.2	16.9	16.6	15.8	16.0		76.5	14.4	4.3	33.1	4.1		55.9	64.0

Recorded By: gah

Verified By: djw

Run Set Post

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
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SITE EQUIPMENT INFORMATION

1. TYPE OF EQUIPMENT BOTH

2. LANE NUMBER ON SITE 1 3. DIRECTION ON SITE east

4. VENDOR IRD MODEL WCU-3 SERIAL#

5. WEIGHING SENSOR TYPE bending plate

6. SYSTEM SOFTWARE VERSIONS:

CPU	<u>WCU3</u>
LOOP	<u>LSM</u>
PIEZO	<u></u>
WEIGHPAD/ LOADCELL	<u>SSM</u>
COMMUNICATIONS	<u></u>

7. CLASSIFICATION VIDEO:

TIME FROM: <u>15:10:26</u>	TO: <u>16:11:46</u>
TIME FROM: <u></u>	TO: <u></u>

SITE CONDITIONS

8. PAVEMENT:

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

There is a previous WIM site installation located 330 feet upstream of the WIM scales that may affect the accuracies of the WIM system.

Traffic Sheet 22 LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
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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

the equipment is operating within the manufacturer's tolerances. None of the in-road sensors show signs of damage or excessive wear and appear to be fully secured in the pavement. There is a section of epoxy that has broken free from the conduit run adjacent to the trailing WIM sensor that has been temporarily repaired with asphalt patching material.

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 adverse 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: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
--	---

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: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
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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>63.4</u>	mph	Average WIM Speed	<u>64.4</u>	mph
Mean Difference	<u>0.9</u>	mph	SD of mean	<u>1.6</u>	

Posted Speed Limit	<u>75</u>	mph			
Speed Range	15th percentile - <u>62</u>	mph	85th percentile- <u>71</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>4.31</u>	ft (WIM system average)	
= <u>1.4</u> %				

Average front axle weight for Class 9 vehicles		<u> </u>	lbs	
% error from 10.3 kips (industry average) OR		<u>11.6</u>	lbs (known site value)	
= <u>13.0</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: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
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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 ☒

Conduit exposed in LTPP lane

STATIC AND DYNAMIC ELECTRONIC EQUIPMENT TESTS

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

ADDITIONAL COMMENTS

2' x 6" section of epoxy missing from sensor #2 conduit lead in right wheelpath in LTPP lane.

Assessor _____ Dean Wolf

Traffic Sheet 22 Addendum - Weighpad LTPP MONITORED TRAFFIC DATA SITE EQUIPMENT ASSESSMENT LTPP LANE ONLY	STATE CODE: 04 SPS WIM ID: 040200 STATE ASSIGNED ID 0 DATE (mm/dd/yyyy) 1/23/2013
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STATIC EQUIPMENT VALUES (SYSTEM OFF)

1. POWER

a. Solar Panel	_____	WATTS	20.5	VDC
b. Equipment Power	_____	VAC	13.9	VDC
c. Battery 1	13.4	VDC		
d. Battery 2	13.4	VDC		
e. Regulated	13.9	VDC		
f. Power Supply	_____	VDC		VDC
g. System Input	_____	VAC	11.4	VDC
h. Modem Power	_____	VAC	11.4	VDC
i. Telephone	_____	VDC		

2. LOOP SENSORS

	Resistance		Inductance		Shield	
a. Leading	0.9	Ω	102.0	μ h	inf	M Ω
b. Trailing	0.8	Ω	101.7	μ h	inf	M Ω

3. WEIGHPAD SENSORS

	Input		Output		Shield	
a. Leading	0.981	Ω	0.845	Ω	inf	Ω
b. Trailing	0.985	Ω	0.847	Ω	inf	Ω

DYNAMIC EQUIPMENT VALUES (SYSTEM ON)

4. LOOP SENSORS

	Frequency	
a. Leading	_____	KHz
b. Trailing	_____	KHz

5. WEIGHPAD SENSORS

	Zero Point	
a. Leading	_____	mV
b. Trailing	_____	mV

Assessor _____ Dean Wolf

Traffic Sheet 24A LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Equipment	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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Item	Description	Filename
1	Power Source	040200_solar_panel_1_23_13.jpg
2	Telephone Source	040200_cell_phone_1_23_13.jpg
3	Cabinet Exterior	040200_cabinet_exterior_1_23_13.jpg
4	Cabinet Interior - Front	040200_cabinet_interior_front_1_23_13.jpg
5	Cabinet Interior - Rear	
6	Leading weight sensor	040200_leading_WIM_sensor_1_23_13.jpg
7	Trailing weight sensor	040200_trailing_WIM_sensor_1_23_13.jpg
8	Leading classification sensor	
9	Trailing classification sensor	
10	Leading loop sensor	040200_leading_loop_1_23_13.jpg
11	Trailing loop sensor	040200_trailing_loop_1_23_13.jpg
12	Downstream from site	040200_downstream_1_23_13.jpg
13	Upstream from site	040200_upstream_1_23_13.jpg
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Traffic Sheet 24B LTPP MONITORED TRAFFIC DATA SITE PHOTO LOG - Test Trucks	STATE CODE: 04 SPS WIM ID: 040200 DATE (mm/dd/yyyy) 1/23/2013
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Item	Description	Filename
1	Tractor, Truck #1	040200_Truck_1_Tractor_1_23_13.jpg
2	Trailer/Load, Truck #1	040200_Truck_1_Trailer_1_23_13.jpg
3	Kingpin Offset, Truck #1	
4	Suspension A, Truck #1	040200_Truck_1_Suspension_1_1_23_13.jpg
5	Suspension B, Truck #1	040200_Truck_1_Suspension_2_1_23_13.jpg
6	Suspension C, Truck #1	040200_Truck_1_Suspension_3_1_23_13.jpg
7	Suspension D, Truck #1	040200_Truck_1_Suspension_4_1_23_13.jpg
8	Suspension E, Truck #1	040200_Truck_1_Suspension_5_1_23_13.jpg
9	Suspension F, Truck #1	
10	Tractor, Truck #2	040200_Truck_2_Tractor_1_23_13.jpg
11	Trailer/Load, Truck #2	040200_Truck_2_Trailer_1_23_13.jpg
12	Kingpin Offset, Truck #2	
13	Suspension A, Truck #2	040200_Truck_2_Suspension_1_1_23_13.jpg
14	Suspension B, Truck #2	040200_Truck_2_Suspension_2_1_23_13.jpg
15	Suspension C, Truck #2	040200_Truck_2_Suspension_3_1_23_13.jpg
16	Suspension D, Truck #2	040200_Truck_2_Suspension_4_1_23_13.jpg
17	Suspension E, Truck #2	040200_Truck_2_Suspension_5_1_23_13.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		