APPENDIX C

NCHRP 12-76 SURVEY QUESTIONNAIRE AND RESPONSES

General Information

A new vehicular live-load model was developed for the AASHTO LRFD Bridge Design Specifications because the HS20 truck from AASHTO's Standard Specifications for Highway Bridges did not accurately represent service-level truck traffic. The HL-93, a combination of the HS20 truck and lane loads, was developed using 1975 truck data from the Ontario Ministry of Transportation to project a 75-year live-load occurrence. Because truck traffic volume and weight have increased and truck configurations have become more complex, the 1975 Ontario data do not represent present U.S traffic loadings. Other design live loads were based on past practice and did not consider actual or projected truck traffic.

Although the quality and quantity of traffic data has improved in recent years, it has not been used to update the bridge design loads. The objective of this project is to develop and demonstrate the application of protocols for collecting and processing traffic data to calibrate national bridge live-load models.

Project Objectives

The goal of this project is to develop a set of protocols and methodologies for using available truck traffic data collected at different US high-speed WIM sites and recommend a step-by-step procedure that can be followed to develop and calibrate vehicular loads for superstructure design, fatigue design, deck design, and overload permitting. The models will be applicable for the design of bridge members, for both ultimate capacity and cyclic fatigue. The models will be applicable for both main structural members as well as the design of bridge decks.

Purpose of Survey

High quality WIM data obtained from a network of mainline WIM sites is necessary for using WIM data in bridge design application. The purpose of this questionnaire is to obtain information and document practices on issues central to this research, such as: types of WIM equipment in use in each state and the locations of WIM sites; WIM equipment maintenance and calibration procedures; the types of data being collected and how it is used; ability of state's WIM system to capture and save accurate truck arrival time stamps; etc. Reports on past traffic studies of truck weight trends and bridge design loads using WIM data are also of particular interest. The responses to this questionnaire will guide the development of the recommended protocols.

If you wish to discuss any items related to the questionnaire please contact Bala Sivakumar, P.E., Principal Investigator at 201-368-0400. You may also communicate with us by e-mail at bsivakumar @ lce.us. Fax: 201-368-3955.

The completed questionnaire should be returned to <u>bsivakumar@lce.us</u>, or mailed to:

Bala Sivakumar, P.E.Lichtenstein Engineering Associates, Inc.45 Eisenhower DriveParamus, New Jersey 07652

We ask that you return the completed questionnaire to us by June 1, 2006

On behalf of the NRC/TRB-NCHRP programs and the AASHTO Subcommittee on Bridges and Structures, and the Research Team, we thank you for your cooperation.

Respondent Information

Please provide the name, address and telephone number of the person completing this questionnaire:

Name:		
Title:		
Agency:		
Address:		
Telephone No.:		
Fax No.		
E-Mail:		

Weigh-in-Motion Representative

We are interested in recent truck weight data collected using high-speed weigh-inmotion techniques within your state. Please provide the following information on the contact person in your agency who coordinates such data acquisition and maintenance:

Name:		
Title:		
Agency:		
Address:		
Telephone No.:	E-Mail:	
Telephone No.:	E-Mail:	

SECTION 1.0 Weigh-In-Motion (WIM) Program

- 1.1 Do you have a Weigh-In-Motion (WIM) program? Yes _____ No _____ If yes please answer the following questions. If not, please just respond with no and send the questionnaire back.
- 1.2 How long have high-speed WIM sites been in use for traffic data collection in your state? _____ Years.

SECTION 2 – WIM Sites

2.1 Please provide the following information:

Total number of high speed WIM sites------Number of WIM sites on Interstates------Number of weigh stations------

2.2 How do you select WIM sites (Interstates, NHS, rural arterials, functional classification, etc.). Is there an overall strategy in your site selection?

1.4 Please fill out the following table providing information for each mainline WIM site. Use additional sheets as required.

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)

SECTION 3 – WIM Data

3.1 How frequent are WIM system breakdowns? In your opinion, what percentage of the time is data being collected at the above sites? 3.2 How often and how is your WIM data captured? 3.3 What types of traffic data are typically stored and used (axle weights, gross weights, axle spacings, truck type, etc)? 3.4 What is the accuracy of truck arrival time stamps reported in the data set (1 sec, 0.01 sec, etc)? Are time stamps available for more than one lane at a site? What is the highest resolution possible for truck arrival times? Please explain. 3.5 Do you archive your WIM data? In what format and for how long is the data archived? Please explain. 3.6 Do you archive the binary WIM data files from the data collector? If so, how much binary data do you have archived? Please explain.

- 3.7 Do you have traffic data for a whole year (or close to a year) at a WIM site that can be made available for our statistical analyses of seasonal variations of truck weights? Yes _____ No _____
- 3.5 Do you have traffic data of similar quality for a number of years at the same site that may be helpful in estimating trends in truck loadings? Yes _____ No _____

SECTION 4 – WIM Data Validation and WIM System Calibration

4.1 Do you do WIM data quality testing or validation to ensure data accuracy? Please explain.

4.2 How often do you recalibrate WIM systems? Do you have a procedure to decide if a recalibration is required? Please explain.

- 4.2 Who does the recalibration of WIM systems?
- 4.3 Please describe the recalibration techniques (Test trucks, AVI, Auto-calibration)?

4.4 Do you have a Quality Assurance Program in place for your WIM systems to check data accuracy? Yes _____ No ____.

SECTION 5 – WIM Data Analysis & Applications

5.1	What specialized software do you use for data handling and processing of WIM data?
5.2	Do you analyze your WIM data? What factors do you analyze? To whom do you distribute the results?
5.3	Is your WIM data currently used for the following?
	Pavement Design
	Bridge Design
	Enforcement
	Planning & Programming
5.4	Have you used WIM data to investigate truck weight trends in your state? Yes No If yes, please explain (please also include references to any reports).

5.5 Has your state used WIM data for bridge design applications / bridge live load modeling? Yes _____ No ____. If yes, please explain (please also include references to any reports).

TABULATED RESPONSES

Question 1.1 Do you have a WIM program	?		Question 1.2 If yes, how long
State	Yes	No	
Alaska Department of Transportation	Х		10+ years
California Department of Transportation	Х		15 years
Arkansas Department of Transportation		Х	
Connecticut Department of Transportation	Х		9 years
Florida Department of Transportation	Х		32 years
Georgia Department of Transportation	Х		10 years
Hawaii Department of Transportation	Х		18 years
Idaho Department of Transportation	Х		12 years
Indiana Department of Transportation	Х		15 years
Iowa Department of Transportation	Х		15 years
Kansas Department of Transportation	Х		14 years
Louisiana Department of Transportation	Х		7 years
Michigan Department of Transportation	Х		14 years
Minnesota Department of Transportation	Х		22 years
Mississippi Department of Transportation	Х		14 years
Missouri Department of Transportation	Х		10 years
Nevada Department of Transportation	Х		20 years
New Jersey Department of Transportation	Х		13 years
New Mexico Department of Transportation	Х		17 years
New York Department of Transportation	Х		10+ years
North Dakota Department of Transportation	Х		3 years
Ohio Department of Transportation	Х		15 years
Oregon Department of Transportation	Х		8 years
South Dakota Department of Transportation	Х		15 years
Virginia Department of Transportation	Х		
Washington Department of Transportation	Х		16 years
Wyoming Department of Transportation	Х		8 years

Question 2.1 Please provide the following	Total number	Number of	Number of
information	of high speed	WIM sites on	weigh
	WIM Sites	Interstates	stations
State			
Alaska Department of Transportation	7	4	5
California Department of Transportation	137	58	36
Arkansas Department of Transportation	NR		
Connecticut Department of Transportation	36 bi-	21 bi-	5
	directional	directional	
	+4 LTPP	+2 LTPP	
Delaware Department of Transportation	NR		
Florida Department of Transportation	40	14	20
Georgia Department of Transportation	90	30	14
Hawaii Department of Transportation	7	2	1
Idaho Department of Transportation	16	6	10
Illinois Department of Transportation	NR		
Indiana Department of Transportation	52	24	10
Iowa Department of Transportation	28	9	?
Kansas Department of Transportation	9 Perm	3 Perm	4 (not DOT,
	70 Portable	25 Portable	Hiway Patrol
Louisiana Department of Transportation	3	3	7
Maine Department of Transportation	NR		
Maryland Department of Transportation	NR		
Massachusetts Department of Transportation	NR		
Michigan Department of Transportation	41	21	13
Minnesota Department of Transportation	6	2	7
Mississippi Department of Transportation	15	7	30
Missouri Department of Transportation	13	7	1
Nebraska Department of Transportation	NR		
Nevada Department of Transportation	4	4	2
New Jersey Department of Transportation	64	14	
New Mexico Department of Transportation	18	7	N/A
New York Department of Transportation	21	11	
North Dakota Department of Transportation	12	4	7
Ohio Department of Transportation	49 proposed	23 proposed	19 proposed
	44 built	21 built	19 built
Oklahoma Department of Transportation	NR		
Oregon Department of Transportation	22	18	56 fixed
			27 portables
			28 mes
Pennsylvania Department of Transportation	NR		
South Dakota Department of Transportation	14	6	0
Texas Department of Transportation	NR		
Vermont Department of Transportation	NR		
Virginia Department of Transportation	3	2	0
Washington Department of Transportation	37	10	8
Wisconsin Department of Transportation	NR		
Wyoming Department of Transportation	5	3	

Tunetional classification, etc.j. is there an of	verall strategy in your site selection:
State	
Alaska Department of Transportation	WIM sites are placed in areas of high truck traffic along truck routes.
Arkansas Department of Transportation	
California Department of Transportation	NR
Connecticut Department of Transportation	Interstates, functional classification. We use existing permanent class 1 sensor locations providing there is free flowing traffic. LTPP data collection sites based on program need for pavement site specific data.
Delaware Department of Transportation	
Florida Department of Transportation	We try to select our WIM sites so that we have all functional class highways sampled (as long as those roads carry trucks).
Georgia Department of Transportation	We are undergoing a total count reengineering process to determine where we count, what we count, how often we count and what equipment we use at each location. This is due to be completed in October 2006. We currently we collect weigh in motion data at 90 sites on a three year rotation. 30 sites per year using portable piezo equipment and collect for only 48 hours per location, ten of these sites are on the interstate system. We are however looking to have permanent sites in the near future.
Hawaii Department of Transportation	WIM sites are selected according to the guidelines in the TMG.
Idaho Department of Transportation	Site selection is based on required coverage and available resources. We try to add WIM sites when possible in areas of the state that need addition traffic data collection facilities to round out our overall statewide coverage. We also consider traffic trends and current characteristics.
Illinois Department of Transportation	NR
Indiana Department of Transportation	Many of the original sites were selected to comply with the Traffic Monitoring Guide (TMG) and the Highway Performance Monitoring System (HPMS) requirements. Other sites were selected as Long Term Pavement Performance (LTPP) sites. Still others were selected due to pavement warranty projects. At one time there was an emphasis to have WIM at all Interstate Port of Entries. Currently there is an effort underway combine WIM activities with the Weigh Station./Enforcement in an overall strategic plan
Iowa Department of Transportation	We try to get a mix of different functional classes. Currently we are trying to select sites that are on routes entering/exiting the state (near the borders if possible) and routes on new highways or highways that we know that are about to be expanded to from 2 to 4 lanes.

Question 2.2 How do you select WIM sites (interstates, NHS, rural arterials, functional classification, etc.). Is there an overall strategy in your site selection?

Kanaga Department of Transportation	FUWA DOT Troffic Manitaring Cuida autlinea
	selection procedure based on the HPMS. Our samples are selected by Functional Class and stratified by volume group. Portable weighing is based on this sample. The permanent sites were selected to support the Long-Term Pavement Performance program of the Strategic Highway Research Program in 1990-2000. These sites are still collecting for this program, and used as appropriate to collect for the HPMS.
Louisiana Department of Transportation	High volume interstates
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	At the current time and in the past there was no overall strategy. Initially SHRP drove the installation of WIM. Some of those sites are still in service. Others were installed per requests of State Police Motor Carrier and Pavement Design engineers to monitor activity on pavement test areas. We install our sites mostly at existing Permanent Traffic Recorder sites.
Minnesota Department of Transportation	Truck volumes, geographic locations and dispersion.
Mississippi Department of Transportation	In previous years the sites were selected randomly using statistical analysis with the intent that the randomly selected roadway had to be sufficient to collect WIM data. The sites were selected for each functional classification group. You have to have a smooth, flat, and straight roadway.
Missouri Department of Transportation	We select a small number of locations designed to be representative of much larger groups of roads. For accurate WIM operations, we locate WIM sites on flat, strong pavement in good condition with constant vehicle speeds. We also take in consideration truck load factors and freight movement.
Nebraska Department of Transportation	
Nevada Department of Transportation	 WIM sites are selected according to traffic segments. Selection of Wim sites is prioritized as a hierarchy of significant truck routes assuming that the roadway meets physical characteristic specifications for effective WIM data collection. The highest priority is to have coverage on the Interstate system. These sites are used for planning purposes and to a lesser degree for weight enforcement screening with the permanent WIM sites, which are located upstream from an inspection facility. New Jersey's initial 9 WIM systems were selected as part of the SHRP/LTPP Program. New sites
	are being installed as part of construction projects and are based on geographical location within the state and functional classification.
New Mexico Department of Transportation	On routes with high volume truck traffic, mostly interstate and NHS.

New York Department of Transportation	The following factors are included: program area need, design need, geometry of location, minimum pavement condition to support sensor accuracy, minimum truck traffic to support auto-calibration of system, funding, ability to integrate into statewide traf mon (continuous count) program.
North Dakota Department of Transportation	Near weigh stations and on major truck routes.
Ohio Department of Transportation	We group the WIM sites by FC. We try to have WIM's by % of AADTT for each of those FC's. Due to budget limitations we have capped our program of 50 WIM's. We strive to have WIM's on all major NHS routes and roads that contain specialized commodities. Known coal, steel, logging, land fill & quarry roads have been and will be part of our WIM site plan.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Based on truck volume.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Mixture of all functional classifications
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	We look for new, smooth pavement. We plan to eventually have 6 sites in each of 3 groups: 1) high volume interstate and arterials, 2) low volume interstate and arterials, and 3) minor arterials and major collectors
Washington Department of Transportation	The WIM sites were selected in 1991 to address the needs of the Strategic Highway Research Program (SHRP). This program needed traffic and weight data on selected section of highway. Since then we have added several sites based on customer needs (the last installation was to determine if trucks were trying to bypass a point of entry and if so were they overweight.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	The priority has been placed on interstates. A representative sample of all functional classifications has been a goal and secondary strategy.

State	
Alaska Department of Transportation	Our WIM sites breakdown infrequently. With the
	exception of the Chulitna and Glenn OB site, our
	sites are collecting useable data 90% of the time.
Arkansas Department of Transportation	
California Department of Transportation	Variable. Some every 4-6 months others operate
	for years. Average once a year. 90%
Connecticut Department of Transportation	Most breakdowns are failure of sensors imbedded
	in the roadway. Data is only collected for 48 hours
	once every three years. Varies by site and age of
	software changes ate that involve breakdowns
	Currently we have had systems running a couple
	of years continuously without breakdowns
	Overall it is expected that ³ / ₄ of a year on
	continuous collection devices is a reasonable
	expectation. Vehicle tracking during snowstorms,
	etc. can cause data to be erroneous.
Delaware Department of Transportation	
Florida Department of Transportation	Not very. Usually the problem lies with
	communications or piezo failures. The WIM
	electronics are very reliable. Last year, 20 of 40
	WIM systems collected a full year of data. The
Coordin Department of Transportation	Systems operate 85 – 90% of the time.
Georgia Department of Transportation	since we only have portable sites, I am unable to
Hawaii Department of Transportation	WIM breakdowns do not occur that often but they
	can last for long periods. It varies from site to site.
	however, on average they are fully operational at
	least 75% of the time.
Idaho Department of Transportation	We have had very good luck with our WIM system
	dependability. Systems are down a very small
	percentage of the time - no more than a few days
Illingia Department of Transportation	a year on average.
Indiana Department of Transportation	NR Approximately 20% of our WIM sites are down due
	to equipment failures, connection problems or
	road construction. This varies tremendously from
	month to month.
Iowa Department of Transportation	System breakdowns are infrequent. Occasionally
	have a data collector malfunction. If a sensor goes
	bad might be months before it is replaced due to
	the season. At 90% of the sites data is being
	collected 100% of the time unless.
Kansas Department of Transportation	The data is frequently unusable. System
	breadowns are part of the problem. A greater
	locations that are not ideal for data collection, but
	were necessary for LTPP test site proximity
	Portable provides a better data sample.
Louisiana Department of Transportation	Major breakdowns are fairly rare. There are
	occasional software and camera adjustments and
	maintenance needs.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR

Question 3.1 How frequent are WIM system breakdowns? In your opinion, what percentage of the time is data being collected at the above site?

Michigan Department of Transportation	Not very often. Our estimate is that about 95% of the time the systems are up and running. If sites do not respond during polling, we go to the site and correct the problem. When sensors fail we replace them as soon as weather permits.
Minnesota Department of Transportation	Very few breakdowns, mostly in electronic cabinets, power outages. 95% of the time - data is collected.
Mississippi Department of Transportation	The WIM system usually does not breakdown. The loops and sensors are what usually go bad. As far as the WIM board goesthey typically last awhile unless something happens that you can't control like lightning. To answer your question I would say 85 to 90% of the time they are collecting data, but it may not always be good data.
Missouri Department of Transportation	Very infrequent, 98% of the time
Nebraska Department of Transportation	
Nevada Department of Transportation	95%
New Jersey Department of Transportation	The frequency of breakdowns depends on the age of the system both roadway sensors and electronics. Average percentage of data being collected for 1 to 3 year old systems is 95%; over 3 years old and sensors still intact in the pavement and in working condition, 60 to 75%; and over 5 years old, 50%.
New Mexico Department of Transportation	Breakdowns are not that frequent (mostly the piezos go bad), our problem is road detierates. 80 percent.
New York Department of Transportation	Sites are fully operational approximately 90% of the time. Sites typically go down due to sensor failure but sensors are replaced under performance based maintenance contracts.
North Dakota Department of Transportation	95% of the time, data is available
Ohio Department of Transportation	This varies by type of system. The high end load cells and bending plates are more reliable. You can get 2 years or more before they break. Our load cell systems require year PM's. Prezo sites last 2-3 years. Our BL's don't seem to hold up very well. On we have about 5 sites breakdown a month. (10%)
Oklahoma Department of Transportation	
Oregon Department of Transportation	Less than 3% downtime Annually at any given site, otherwise data is collected 100% of the time.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Breakdown is not very often, 99% of time data is collected
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	99.7% uptime
Washington Department of Transportation	This depends on construction. The site maybe working but due to construction, it's down. About 98% working
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Frequency varies from site to site. Data is being collected 80-90% on average from these sites.

Question 3.2 How of and how is your WIM data captured?				
State				
Alaska Department of Transportation	Our WIM data is captured through remote site telemetry and dial up phone connections on a daily basis. However, during communication breakdowns manual downloads may be required.			
Arkansas Department of Transportation	/			
California Department of Transportation	Daily at some weekly at others			
Connecticut Department of Transportation	Data collected for 48 hours once every three years. Data is collected in IMG format. The LTPP sites in Connecticut are set-up for continuous data collection and storage. Currently, FHWA Classes 1-3 vehicle records are filtered from the stored records.			
Delaware Department of Transportation				
Florida Department of Transportation	All WIM sites operate continuously and save data in daily files. The daily files are downloaded automatically every night.			
Georgia Department of Transportation	We collect 48 hours of data annually at 30 sites. Contractor collects data processes the data through VTRIS and submits to us at the end of the year. It is all bundled and ready for submission to FHWA.			
Hawaii Department of Transportation	The data is polled on the next work day.			
Idaho Department of Transportation	We autopoll all WIM systems nightly.			
Illinois Department of Transportation	NR			
Indiana Department of Transportation	We utilize Chaparral Systems "TRADAS 3" program to auto poll all WIM sites nightly.			
Iowa Department of Transportation	The WIM data is captured and saved on an hourly basis with Peek Automatic Data Recorders (ADR).			
Kansas Department of Transportation	Permanent sites are downloaded daily/weekly/monthly as appropriate.			
Louisiana Department of Transportation	It's not			
Maine Department of Transportation				
Maryland Department of Transportation	NR			
Massachusetts Department of Transportation	NR			
Michigan Department of Transportation	Our Permanent Traffic Recorders are polled every night. The data is uploaded to our database once per week.			
Minnesota Department of Transportation	Polled daily - except weekends			
Mississippi Department of Transportation	Each vehicle is captured in one record and then the data is stored on the server by day by hour.			
Missouri Department of Transportation	Data is extracted from WIM units bi-weekly via phone/modem connection with our central traffic monitoring section.			
Nebraska Department of Transportation				
Nevada Department of Transportation	Our WIM data is dowloaded daily to a remote computer in our home office			
New Jersey Department of Transportation	Data is downloaded from the office through dial up modem daily, covering each of the WIM sites about once weekly.			
New Mexico Department of Transportation	Polled and downloaded weekly.			
New York Department of Transportation	Sites are polled every 2-3 days			
North Dakota Department of Transportation	7 24 365 captured and downloaded daily.			
Ohio Department of Transportation	We collect WIM data every day from every site. The Traffic Monitoring Guide (TMG) format is produced along with the vendor raw data files.			

Oklahoma Department of Transportation	
Oregon Department of Transportation	Crescent (streaming) data captured "real time" in a DB2 format. Report data downloaded monthly (notepad – text)
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Every day
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	a PC modem polls each site daily
Washington Department of Transportation	The data is collected hourly and polled weekly.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Sites are polled daily via telemetry.

gross weights, axle spacings, truck type, etc	5.)?
State	
Alaska Department of Transportation	All data collected by the WIM sites is stored in an in house Oracle database.
Arkansas Department of Transportation	
California Department of Transportation	Axle WT, spacing. Classification, length.
Connecticut Department of Transportation	Axle weights, gross weights, axle spacing and truck type. Data are stored to create the FHWA C and W cards. These data include axle weights, gross weights, axle spacings and vehicle length.
Delaware Department of Transportation	
Florida Department of Transportation	Per vehicle records are saved for all vehicles with classifications of 04 and higher. The data consists of date, time, vehicle number, lane, class, gross vehicle weight, speed, overall length, left and right wheelpath weights of each axle, and spacings between each axle.
Georgia Department of Transportation	We store on disk all the raw files and FHWA VTRIS reports. Which includes the axle weights, gross weights, axle spacings, truck types, etc.
Hawaii Department of Transportation	Axle weight, spacing, gross weight vehicle class, speed, and overall length
Idaho Department of Transportation	We collect all variables possible on each system. This includes each of the ones you mention plus everything else the system allows us to collect.
Illinois Department of Transportation	NR
Indiana Department of Transportation	We have daily, monthly, and annual WIM summaries going back to 2000. The TRADAS 2 versions were converted to TRADAS 3. These summaries include axle load distributions by lane, direction, and roadway, and for daily, monthly, and annual time periods. Beginning with TRADAS 3, we store the above plus the raw data files, plus a binary version of the individual vehicle records. We have those for 2005 through the present.
Iowa Department of Transportation	Traffic data stored is record type, FIPS state code, station ID, direction and lane of travel, date and hour, vehicle class, total weight of vehicle, individual axle weights and axle spacings.
Kansas Department of Transportation	Axle weights and spacings, truck classification, time, date, speed
Louisiana Department of Transportation	Axle, GVW, Bridge Formula, Truck Type—Not kept for longer than is needed to deal with truck loads real time. Historical WIM data is non- existent at this point.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NK
Michigan Department of Transportation	We store all data gathered – individual axle weights, total gross weight, axle spacing, total length, number of axles, Federal Scheme F vehicle code, speed of the truck
Minnesota Department of Transportation	Vehicle class, axle wt., gross wt., axle configuration wt. ESALs
Mississippi Department of Transportation	Vehicle type, axle weights, total weight, axle spacings are stored. To a certain degree all data is used for calculating ESAL factors.

Question 3.3 What types of traffic data are typically stored and used (axle weights, gross weights, axle spacings, truck type, etc.)?

Missouri Department of Transportation	Total Vehicle Weight – Gross Vehicle Weight Number of Axles Axle Weight Axle Spacing Vehicle Classification
Nebraska Department of Transportation	
Nevada Department of Transportation	All planning data items have been archived in a database until recently we have transitioned into using a canned processing software known as Tradas which does not have the capability to write individual truck weight records with such information as axle weights, gross weights etc. It does write the federally required "W" card which could be appended to a data base but at that this time it is written in metric and at this point we do not have the capability to produce customized reports.
New Jersey Department of Transportation	Raw data in binary format from each of the sites is saved for future use. Various reports are generated monthly from each of the sites. Classification data in C-record format are all saved monthly. Weight or W-record format data are only saved one week each quarter. Average vehicle speed data is saved in a Microsoft Office worksheet format. Special reports can always be generated from the raw-binary data.
New Mexico Department of Transportation	4 and 7 cards.
New York Department of Transportation	Truck data is captured and stored using the FHWA 'w' card format with the addition of vehicle speed to 0.1 mph and vehicle time stamp to 0.01 seconds.
North Dakota Department of Transportation	Axle weights & spacings, GVW, Time, date
Ohio Department of Transportation	For 2006 and beyond all load cell sites will store per vehicle records for all vehicles - not just trucks. For every WIM we collect and store spacings, time, date, GVW, and axle weights. We are working at having speed in the TMG W-card format from each of our vendors.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Axle weights, axle spacing, GVW, classification, length, speed, lane, time/date
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	weights, gross weights, axle spacings, truck type (Federal Classification Scheme F)
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	time, lane, speed, class, length, gross wt., ESAL, axle spacings, axle weights
Washington Department of Transportation	All of the above is collected at most sites. Axle spacing not always used other to determine class of vehicle.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Station ID, direction of travel, lane of travel, year, month, day, hour, FHWA classification, number of axles, GVW, axle weights and spacings.

Question 3.4 What is the accuracy of truck arrive time stamps reported in the data set (1 sec, 0.01 sec, etc.)? Are time stamps available for more than one lane at a site? What is the highest resolution possible for truck arrival times? Please explain.

State	
Alaska Department of Transportation	The accuracy of the truck time arrival is .01 for all lanes of data. The time stamp is on each vehicle record (PVR). This was an Alaska requirement to ensure that duplicate records were not loaded to the data base. This is the highest resolution possible for truck arrival times.
Arkansas Department of Transportation	
California Department of Transportation	0.01 sec. Yes.
Connecticut Department of Transportation	Truck arrival time stamps are reported for each lane at a site and are recorded by 1 second. The IRD software shows the data time stamp recorded to one hundredth of a second (0.01) in the individual vehicle viewing software. Additional work would be needed to determine the resolution of the data that is reported in the output file formats.
Delaware Department of Transportation	
Florida Department of Transportation	Times are recorded to the nearest full second, for all lanes.
Georgia Department of Transportation	Accurate to the .01 second and we weight in one lane of the roadway. At 10 locations we collect truck traffic in the two outside lanes.
Hawaii Department of Transportation	Time stamps are not checked for minute/second accuracy. We check them for date accuracy, and we check the WIM system clock at least once per month. Observed accuracy for those can range from within 1-2 seconds to 1-2 minutes.
Idaho Department of Transportation	ECM WIM system equipment has a time resolution of one tenth of a second. The IRD/Diamond WIM systems have a "scientific" mode setting which allows for data collection with a time stamp of one hundred thousands of a second. We have used this mode to collected WIM data for use by Dr. Gong Fu of Wayne State University in his bridge design modeling. Call me at 208-334-8207 if you want to discuss this further.
Illinois Department of Transportation	NR
Indiana Department of Transportation	The timestamps for the vehicle records are to the 1/100 of a second. The ascii report, however, will alone show the timestamp to the nearest second. This is a shortcoming that has been identified and will be corrected in future versions of the software.
Iowa Department of Transportation	They are stored by the hour. We can view the info real time to the second and can be viewed for all lanes at the site.
Kansas Department of Transportation	Accuracy varies because the on-site clock is not externally synchronized. Precision of the arrival time is 1 second, which is the finest resolution available from the equipment. Time stamps are available for each truck, regardless of lane.
Louisiana Department of Transportation	N/A
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR

Michigan Department of Transportation	The time stamp is down to the second for each lane of travel. So we have the hour, minute and second the vehicle started to cross the sensor.
Minnesota Department of Transportation	whole second
Mississippi Department of Transportation	We store the data on an hourly basis in the cardw, but the img file has a time stamp associated with each vehicle. We collect WIM data on all lanes at a permanent site.
Missouri Department of Transportation	Year, month, day, hour
Nebraska Department of Transportation	
Nevada Department of Transportation	We have never had the need to invcestigate this but from my experience it is within a second
New Jersey Department of Transportation	Truck arrival time stamps using the "View Vehicle" menu of the IRD office software shows a time stamp of up to 0.01 of a second; processed weight data from the W-record cards only up to one minute.
New Mexico Department of Transportation	Hourly, for all lanes.
New York Department of Transportation	All lanes are monitored and trucks are time stamped to 0.01 seconds.
North Dakota Department of Transportation	1 second resolution – Yes, time stamps available on all lanes at all times
Ohio Department of Transportation	Mettler-Toledo's time stamp is now sub second at .01 sec. The TMG does not have this resolution and needs to be changed. The time stamp is on each vehicle so it would be by lane. Peek or Pat/IRD do not provide time stamps to the .01 second level.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Time stamp accuracy is within .01 seconds. Time stamps are available for each lane in multi-lane systems.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	unknown on accuracy of arrival time and are by lane
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	time stamps are to the nearest second, and are available for all lanes
Washington Department of Transportation	12:00:00:00
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Time stamps are to the second and are by lane.

data archived? Please explain.	
State	
Alaska Department of Transportation	All WIM data is saved into an Oracle database for future use and analysis.
Arkansas Department of Transportation	
California Department of Transportation	Yes, indefinite
Connecticut Department of Transportation	WIM data is collected in IMG format and converted to STA, CLA and WGT. Data is archived and stored on a floppy disk. Data are stored to create the FHWA C and W cards. These data include axle weights, gross weights, axle spacings and vehicle length.
Delaware Department of Transportation	
Florida Department of Transportation	Yes. Binary data is archived forever. We have the most recent 2 years of ASCII data online.
Georgia Department of Transportation	We maintain our WIM data on CDs and we have only 3 years of data. It is maintained in raw formats and VTRIS formats
Hawaii Department of Transportation	We maintain an archive of the raw data files, TMG format files, and processed report files (as Adobe PDFs) starting from 2003.
Idaho Department of Transportation	We have WIM data archived back to original installation date for each system.
Illinois Department of Transportation	NR
Indiana Department of Transportation	INDOT has processed WIM data from 2000 to the present. The processed data includes ESAL and GVW statistics, vehicle classification distributions, and axle load distributions. These exist for each lane, direction, and for the roadway, and for daily, monthly, and annual time periods. Beginning in 2005, we have the above plus the binary raw data files (stored as zipped BLOBs in the database) and a binary version of the individual vehicle records. Our analysis program will convert the binary versions to FHWA W-records.
Iowa Department of Transportation	We archive our WIM data in FHWA 7-card format. We have data back to 1996.
Kansas Department of Transportation	14 years, so far. The oldest data is stored in the FHWA Card-7 format, newer data is stored in the FHWA Card-W (since 1995.) Some data is also available in the vendor formats provided by the field equipment.
Louisiana Department of Transportation	Not at this time, though it is planned for the future.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	Yes we archive the WIM data. We have an Oracle database table that the data is imported into. We have 3 years of data in that database. Data before that is stored in the original output format and there is a fair amount in FHWA format.
Minnesota Department of Transportation	Proprietary binary in zipped files stored indefinately.
Mississippi Department of Transportation	The data is archived in a text filecardw format. We have archived WIM data from 1993.
Missouri Department of Transportation	Yes, tabular format, 5 years
Nebraska Department of Transportation	

Question 3.5 Do you archive your WIM data? In what format and for how long is the data archived? Please explain.

Nevada Department of Transportation	Up to this point we have arheived all data items in a foxpro database fromat and have archived our federally submitted files for a period of ten years.
New Jersey Department of Transportation	Raw data (bin format) collected from each site are saved in a CD-ROM monthly. Classification and speed data are summarized in Excel format and published on NJDOT's website. Reporting requirement by FHWA is on a VTRIS data base and copy is also saved.
New Mexico Department of Transportation	Yes 4card and 7card formats. Seven years as specified by TMG.
New York Department of Transportation	Yes, See 3.3
North Dakota Department of Transportation	Data is currently stored on PC, - No long term storage plan has been developed yet.
Ohio Department of Transportation	We archive all WIM data forever and we store it in the current TMG W & C card formats. We also store speed for each site.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Crescent data is stored on a mainframe – indefinitely. Report data (text format) is kept for one year.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Processed TMG Card 4 and 7 Format. Forever
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	WIM Data is archived in its original format on a server.
Washington Department of Transportation	We do archive our data. We have data back to 1994
Wisconsin Department of Transportation	
Wyoming Department of Transportation	WIM data is archived in the FHWA "traffic monitoring data formats" and the WIM instruments unique text format.

how much binary data do you have archived	? Please explain.
State	
Alaska Department of Transportation	All AK WIM data files are archived in binary format. In 2000, the WIM program was centralized in the Statewide Program Development office. Since that time, WIM sites have been added and existing systems rebuilt. Also, the State contracted out on-site WIM maintenance and the biannual calibration to IRD. Under the States IT Task Order system, a new WIM Oracle Database and web interface reporting system was developed by Wostmann & Associates, Inc. for use by DOT&PF staff.
Arkansas Department of Transportation	
California Department of Transportation	Yes
Connecticut Department of Transportation	Data is collected in ASCII format. Data are stored to create the FHWA C and W cards. These data include axle weights, gross weights, axle spacings and vehicle length.
Delaware Department of Transportation	
Florida Department of Transportation	Yes. WIM binary files are available for systems installed since 1988.
Georgia Department of Transportation	No we do not maintain the binary files at this time.
Hawaii Department of Transportation	Yes. Binary data back to March of 2003 is available.
Idaho Department of Transportation	Same as above – archived back to original installation date for each system.
Illinois Department of Transportation	NR
Indiana Department of Transportation	See answer to 3.4
Iowa Department of Transportation	We do not archive binary WIM data.
Kansas Department of Transportation	binary data, but the final data reported for FHWA is the official archive.
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	Yes we do and we have up to 10 years of data backed up on DVD/CD
Minnesota Department of Transportation	All recent data is stored, also some from 1990's
Mississippi Department of Transportation	Yes, that would be the img file as mentioned above.
Missouri Department of Transportation	Yes, 5 years of data
Nebraska Department of Transportation	
Nevada Department of Transportation	Yes we do and we have from three to ten years of data archived
New Jersey Department of Transportation	Yes, see above section 3.5.
New Mexico Department of Transportation	Current year only.
New York Department of Transportation	No
North Dakota Department of Transportation	Same as above
Ohio Department of Transportation	Yes - class & speed files from all of our peek sites. At some point we will store all per vehicle records at these sites so we won't need to bin the data. From what we see, as soon as data is summarized (binned), it isn't what a customer wants.
Oklahoma Department of Transportation	

Question 3.6 Do you archive the binary WIM data files from the data collector? If so, how much binary data do you have archived? Please explain.

Oregon Department of Transportation	The "binary" data (Crescent) appears as "text." Archived to the beginning of WIM data collection
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	None
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	We have all binary WIM data files archived on a
	server.
Washington Department of Transportation	We archive the binary data - see above
Wisconsin Department of Transportation	
Wyoming Department of Transportation	No

Question 3.7 Do you have traffic data for a whole year (or close to a year) at a WIM site that can be made available for our statistical analyses of seasonal variations of truck weights?

	·
State	
Alaska Department of Transportation	Yes
Arkansas Department of Transportation	
California Department of Transportation	Yes
Connecticut Department of Transportation	Yes
Delaware Department of Transportation	
Florida Department of Transportation	Yes
Georgia Department of Transportation	No
Hawaii Department of Transportation	Yes
Idaho Department of Transportation	Yes. Lots of available WIM data.
Illinois Department of Transportation	NR
Indiana Department of Transportation	Yes
Iowa Department of Transportation	Yes
Kansas Department of Transportation	Yes
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	Yes
Minnesota Department of Transportation	Yes
Mississippi Department of Transportation	Yes
Missouri Department of Transportation	Yes
Nebraska Department of Transportation	
Nevada Department of Transportation	Yes
New Jersey Department of Transportation	Yes
New Mexico Department of Transportation	Yes
New York Department of Transportation	Yes
North Dakota Department of Transportation	Yes. Possibly.
Ohio Department of Transportation	Yes
Oklahoma Department of Transportation	
Oregon Department of Transportation	Yes. In a text format
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Yes
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	Yes
Washington Department of Transportation	Yes
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Yes

State	S
Alaska Department of Transportation	Yes
Arkansas Department of Transportation	
California Department of Transportation	Yes
Connecticut Department of Transportation	No. See answer for previous question.
Delaware Department of Transportation	
Florida Department of Transportation	Yes
Georgia Department of Transportation	No
Hawaii Department of Transportation	Yes
Idaho Department of Transportation	Yes
Illinois Department of Transportation	No
Indiana Department of Transportation	Yes
Iowa Department of Transportation	Yes
Kansas Department of Transportation	Yes
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	Yes
Minnesota Department of Transportation	Yes
Mississippi Department of Transportation	No
Missouri Department of Transportation	Yes
Nebraska Department of Transportation	
Nevada Department of Transportation	Yes
New Jersey Department of Transportation	Yes
New Mexico Department of Transportation	Yes
New York Department of Transportation	Yes
North Dakota Department of Transportation	Yes. Possibly.
Ohio Department of Transportation	Yes
Oklahoma Department of Transportation	
Oregon Department of Transportation	Yes. From "official" state weigh records. These are available from <u>every</u> weigh station location, not just WIM sites.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Yes
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	No
Washington Department of Transportation	Yes
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Possibly

*Question 3.8 Do you have traffic data of similar quality for a number of years at the same site that may be helpful in estimating trends in truck loadings?

accuracy? Please explain.	
State	
Alaska Department of Transportation	Currently we use only IRD's software to determine the accuracy of the data. The quality of the data is suspect at this stage in WIM development.
Arkansas Department of Transportation	
California Department of Transportation	Yes. Validation done with Infotek validation pro. Custom software designed to validate California data.
Connecticut Department of Transportation	Yes. Calibration is done using known vehicles from the traffic stream and typically known weight ranges. When data is processed the volume, speed, classification, and weights collected are checked and compared to the last time data was collected at that specific site. All the data submitted to FHWA is run through a series of validation checks to target common errors. In addition, the data is graphed to determine if vehicle distributions are consistent and appropriate for FHWA Class 9 and FHWA Class 9 front axle loadings. In the past we have run a series of checks including FHWA Class 9 vehicle distributions on the data after collection and prior to submittal.
Delaware Department of Transportation	
Florida Department of Transportation	All WIM systems are calibrated shortly after construction is completed. The data is then monitored to ensure it adheres to the standard established when it was first installed. If the data deviates from the standard, technicians find and correct the problem, and a new calibration is performed.
Georgia Department of Transportation	We only run our data through the quality checks that are contained within VTRIS. We rely on the contractor to validate the data at this time.
Hawaii Department of Transportation	Only basic comparison with historic ADTs, and truck percentages.
Idaho Department of Transportation	We perform routine monitoring of WIM systems to verify data validity and accuracy.
Illinois Department of Transportation	NR
Indiana Department of Transportation	Yes. Through the use of TRADAS software we have thresholds set that look at vehicle characteristics, vehicle stream characteristics. We are also implementing a system where we capture all class 9 vehicle and monitor front axle weight, tandem axle weights and other characteristics to see if through trend data we can determine the failing of sensors before total failure occurs.
Iowa Department of Transportation	We do validation of each site by using the Vehicle Travel Information System on a weekly basis.
Kansas Department of Transportation	We use the front-axle average weight and bi- modal graph to indicate that a site may be out of calibration.
Louisiana Department of Transportation	Compare WIM measurements to static scale readings on a daily basis.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR

Question 4.1 Do you do WIM data quality testing or validation to ensure data accuracy? Please explain.

Michigan Department of Transportation	For data preceding 2004 there was not any validation or quality testing with the exception of SHRP/LTPP locations. Since then our data is passed through gross validity checks when uploaded to our Truck Weight Information System(TWIS) databases. Individual sites have been scrutinized better and has resulted in site upgrade from piezo to quartz piezo or other auto- calibration tweaking.
Minnesota Department of Transportation	Visual observation.
Mississippi Department of Transportation	We just started Quality Control measures to ensure that our sites are calibrated and not malfunctioning on a daily basis.
Missouri Department of Transportation	Yes, With the assistance the CVE division within the Missouri State Highway Patrol, a sampling of the weights of combination vehicles is taken and compared the weights collected by the WIM unit being calibrated.
Nebraska Department of Transportation	
Nevada Department of Transportation	We do several analyses on the data, which we collect. We check the average ESALS as compared to historical data. We also graph the average front axle and gross weight distribution for type"9" vehicles. We also check the vehicle class distribution and total volume as compared to historical data.
New Jersey Department of Transportation	Monthly, data is summarized at each site and we look at vehicle classification information, comparing the numbers from prior months and years. We check the average front axle weights of class 9 vehicles, the peak number, and average empty and loaded weights, which are analyzed whether they fall within expected ranges.
New Mexico Department of Transportation	Yes, when all piezo's are good, we hire a truck with a known weight 75k and calibrate all lanes.
New York Department of Transportation	Please contact us for further information. It is more detailed than what can fit here. Our checks are in line with the FHWA's 'TDQ' program procedures.
North Dakota Department of Transportation	WIM sites and data are monitored daily for calibration drift – Highway patrol uses data and WIM site real time data to monitor truck traffic weights against static/portable weights
Ohio Department of Transportation	Yes - we now have software called Traffic Keeper Ohio (TKO) that does QC checks on all of our volume, length class, axle class and weight data. TKO uses GVW curves and detects the peaks. It reports shifts in the weight peaks based on a "n" number of week average.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Only when an error appears.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Yes, many internal programs to watch daily files for reasonable values
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	The front axle weights and GVW distribution of class 9 vehicles are tracked to detect calibration drift. The number and type of vehicle errors are also monitored.

Washington Department of Transportation	The Electronics Section visits each of the WIM sites and performs a field check of all the equipment and sensors. Once this check is completed a truck (Class 9) with a known weight is rented and the driver makes 10 passes per lane to calibrate the sensors and counter. The data is then polled weekly and placed into a file. At month end the data is evaluated and graphs are produced that show the trend for trucks over the month based on total weight and front axle weight.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Weekly GVW graphs for FHWA class 9's are utilized to validate weight accuracy. Weekly vehicle classification graphs are used to validate classification and volume.

to decide il a recalibration is required : i leas	
State	
Alaska Department of Transportation	Currently, we have a maintenance contract with IRD. The sites are calibrated in the spring and fall
Arkansas Department of Transportation	
California Department of Transportation	LTPP/SHRP sites typically annually. Office calibrations are done first then field calibrations.
Connecticut Department of Transportation	Calibration is conducted each time data is collected. We conduct calibrations and field validations using the FHWA LTPP procedures. These include use of two Class 9 vehicles in good shape, one with air-ride suspension that are fully loaded, statically weighted, and run at least 20 passes by the WIM scale. When possible, it has also been found necessary to use the same truck from one field calibration to the next, as there can be variability between vehicles. This is done at least once a year, sometimes twice. In addition, field calibrations are scheduled if the issues are detected from office review of the data or observed in the field.
Delaware Department of Transportation	
Florida Department of Transportation	Two SHRP WIM at SPS test sites are calibrated/validated annually. Bending plate and Quartz piezo systems are calibrated initially upon installation, and whenever system components (sensors, CPU) are changed. Regular piezo WIM systems will not stay in calibration—they are too temperature dependent
Georgia Department of Transportation	All our sites use portable machines which have
Hawaii Department of Transportation	At least once or twice per year
Idaho Department of Transportation	We monitor systems and compare results to vehicles of known weight. If sensors show problems, we make necessary system adjustments.
Illinois Department of Transportation	NR
Indiana Department of Transportation	All sites are calibrated annually. Obviously if data validation indicated calibration error then that can change the priority of site calibrations.
Iowa Department of Transportation	We have an auto calibrate feature on our data collectors that calibrates the sensors by using front axle weights of class 9(truck/tractor 5 axle combos) and is set to recalibrate approximately 6 times a day.
Kansas Department of Transportation	Portables are recalibrated to a test truck at every site. The permanents are supposed to be calibrated every year.
Louisiana Department of Transportation	As needed-if weight measurements are determined to be somewhat inaccurate (consistently more than plus or minus 5 percent) then recalibration is done.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR

Question 4.2 How often do you recalibrate WIM systems? Do you have a procedure to decide if a recalibration is required? Please explain.

Michigan Department of Transportation	The sites are initially calibrated but not in great detail. All sites have auto-calibration running. We have just implemented a calibration procedure for our bending plate and quartz locations. These are sites used by Motor Carrier and newly installed sites caused by road reconstruction. We are going to monitor the sites to determine when to recalibrate.
Minnesota Department of Transportation	When system results seems erroneous
Mississippi Department of Transportation	We calibrate annually and sometimes more often if
	the site falls out of tolerance. We check the steering weights and spacings on a VC 9 because these attributes usually remain constant.
Missouri Department of Transportation	We try to do the calibration at least once a year sometime between October and December. If a site is re-installed throughout the year a calibration is done with a vehicle of known weight until it can be re-calibrated during the time the remainder of the sites are calibrated.
Nebraska Department of Transportation	
Nevada Department of Transportation	We check the calibration values once a year by collecting observations of a type "9" vehicle at all the permanent sites. We collect seventy-seven observations at each lane being verified which yield the statistical reliability required for 95% accuracy +-5%
New Jersey Department of Transportation	We calibrate only once every 2 years. We go
	Also, at least once a month, the classification is checked, comparing types of vehicles from the traffic stream to the classes recorded by the WIM computer. During the validation process, system calibration factors are also adjusted if found to be over- or under-calibrated.
New Mexico Department of Transportation	We calibrate when all piezo's are good, over 3V output. Below three 3V output we calibrate with with front axle factor with trucks on the road.
New York Department of Transportation	We use the calibration methods outlined in the ASTM WIM Spec. Sites are calibrated with the method annually. The sites also auto-calibrate using the steering axle of a Class 9 (352) truck.
North Dakota Department of Transportation	Once our warranty period expires we plan on calibrating once a year or if calibration drift is detected – Currently, no plan has been initiated yet
Ohio Department of Transportation	We try to do an annual calibration at each WIM site. Our high end systems are calibrated using 2 trucks. Prezo sites are calibrated using 1 truck. If a site has a problem we will delay calibrating it until the problem is fixed.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Wim's are calibrated twice annually, or when weight discrepancies between WIM and static scales are recognized
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Try to calibrate on a 2 to 3 year cycle and if internal program see unreasonable data then will calibrate
Texas Department of Transportation	
Vermont Department of Transportation	

Virginia Department of Transportation	Recalibrations are done when data quality testing indicates excessive calibration drift. Also, DMV mobile weight enforcement crews do periodic spot checks which could trigger a recalibration.
Washington Department of Transportation	Sites are being calibrated once a year. We just restarted our calibration program 2 years ago so not all of our sites have received calibration (some have been rendered useless due to construction programs where the project is lasting 2 – 3 years – HOV lanes additions would be one example in the urban area). We monitor the WIM data and if we have front axle weights or total weights outside of an expected range our WIM technician will perform a trouble call to the site. Also if any of the sensors are replaced the site will be recalibrated.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Annually if needed and only if test truck results warrant adjustments.

*Question 4.3 Who does the recalibration of WIM systems?		
State		
Alaska Department of Transportation	IRD	
Arkansas Department of Transportation		
California Department of Transportation	Caltrans or IRD, for field calibrations. Caltrans only for office calibrations.	
Connecticut Department of Transportation	The person who collects the WIM data.	
	Recalibration is conducted in-house with	
	connDOT staff and niring with rented vehicles and	
Delaware Department of Transportation		
Elorida Department of Transportation	In-house staff or consultants.	
Georgia Department of Transportation	NR	
Hawaii Department of Transportation	The manufacturer's own technicians (usually IRD)	
	or an authorized representative thereof.	
Idaho Department of Transportation	and calibration.	
Illinois Department of Transportation	NR	
Indiana Department of Transportation	We have a maintenance contract with International Road Dynamics (IRD) who does our site	
	calibrations.	
Iowa Department of Transportation	I am responsible for recalibration.	
Kansas Department of Transportation	KDOT personnel responsible for portable scales.	
Louisiana Department of Transportation	International Road Dynamics can do it remotely.	
Maine Department of Transportation		
Maryland Department of Transportation	NR	
Massachusetts Department of Transportation	NR	
Michigan Department of Transportation	We do our own calibration.	
Minnesota Department of Transportation	Internal staff	
Mississippi Department of Transportation	Mississippi DOT Planning Division's Traffic	
Missouri Department of Transportation	MoDOT Field Personnel along with assistance a	
	personnel from the MSHP - CVE section.	
Nebraska Department of Transportation		
Nevada Department of Transportation	Our Traffic Information division	
New Jersey Department of Transportation	Bureau (DOT) staff with help from the Department of Treasury's truck and driver.	
New Mexico Department of Transportation	NMDOT/Contractor	
New York Department of Transportation	In-house staff.	
North Dakota Department of Transportation	NDDOT personnel plan to do this	
Ohio Department of Transportation	I do most of the calibrations. One field technician calibrates the 8 WIM's in his area	
Oklahoma Department of Transportation		
Oregon Department of Transportation	ITS Specialist – through remote access	
Pennsylvania Department of Transportation		
South Dakota Department of Transportation	US with assistance from Motor Carrier Division	
Texas Department of Transportation		
Vermont Department of Transportation		
Virginia Department of Transportation	This is done in-house	
Washington Department of Transportation	Our WIM Technician – Hoang Nguyen.	
Wisconsin Department of Transportation		
Wyoming Department of Transportation	Planning WIM personnel.	

*Question 4.4	Please describe the recalibration techniques (Test trucks, AVI, A	\uto-
calibration)?		

State	
Alaska Department of Transportation	Test truck
Arkansas Department of Transportation	
California Department of Transportation	Test trucks driven at various speeds. Limits set at +/-5% error. Office calibration's using weights from Class 9 vehicles using 10.5 kips as base and historical data.
Connecticut Department of Transportation	Calibration is conducted using known vehicles from the traffic stream and typically known weight ranges. Through the office checks and the LTPP checks conducted by the FHWA Regional contractors.
Delaware Department of Transportation	
Florida Department of Transportation	We calibrate our WIM systems to a class 09 truck with air suspension that is loaded between 70,000 and 80,000 pounds gvwt. As many runs as needed to dial in the system, and then a minimum of 20 runs with no changes to any parameters to validate the calibration. The validation runs consist of a minimum of 3 runs at each speed calibration point (there are 3 such points) and each intermediate 5mph speed. If the truck can make quick turn arounds, we'll make 4 runs at each speed point.
Georgia Department of Transportation	NR
Hawaii Department of Transportation	Recalibration is performed as per ASTM 1318 using pre-weighed test trucks.
Idaho Department of Transportation	Primarily auto-calibration, but also adjustment of gain and control based on system software provided by the vendor. We can also control the type and number of characteristic vehicles used by each WIM system for auto-calibration
Illinois Department of Transportation	NR
Indiana Department of Transportation	When we do our annual calibrations at the WIM sites, we typically have a class 9 semi, 5 axle, loaded between 70K – 80K with a static load and make 10 passes. Auto-calibration is only used at piezo sites, it is disabled at our Single Load Cell sites.
Iowa Department of Transportation	As mentioned before we do recalibration using the auto-calibrate feature on data collector. We have also done validation by using test trucks.
Kansas Department of Transportation	Autocalibration full-time, with annual test trucks. The load-cell scale was calibrated using the ASTM calibration specification initially, but it became far too expensive and time-consuming to continue.
Louisiana Department of Transportation	Calibrated against static scale using vehicle of known weight.
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	Sites with Piezo sensors are on auto-calibration. The calibration process we are implementing is accomplished using test trucks.
Minnesota Department of Transportation	Auto-calibration, test trucks

Mississippi Department of Transportation	We use the test truck method for calibration. We have a test truck (VC 9) with a known static weight. We make 3 runsif the dynamic weights are in tolerance we make 4 more consecutive runs. If the dynamic weights fall out of tolerance we start over. You can refer to AASHTO guidelinea for the tolerance back
Missouri Department of Transportation	Along with the assistance of MSHP -CVE personnel, combination vehicles are randomly pulled over and weighed along the roadside. The weights taken from the scales are radioed to the attending technician at the permanent WIM installation after the vehicle passes over the piezos at the site location.
Nebraska Department of Transportation	
Nevada Department of Transportation	We perform the analyses described previously and do an annual on-site verification of calibration factors with a test vehicle.
New Jersey Department of Transportation	A five axle tractor-trailer combination truck with a good suspension and a non-shifting load (approximately symmetric side to side load) of between 75,000 and 80,000 pounds gross vehicle weight (GVW) is used. The weight (front axle and GVW) is recorded at a certified static scale. The test vehicle makes multiple runs over the WIM-system sensors in each lane at prescribed speeds. At least 10 runs per lane are made before adjustments to the calibration factors followed by 3 more runs after the adjustment with value within about +/- 5 of the GVW. Each sensor is calibrated independently from each other in each lane. The system's auto calibration parameters are also set up to self-adjust at various temperatures and specified times.
New Mexico Department of Transportation	Test trucks, front axle factor 10K to 12K when piezo's are 3V and under.
New York Department of Transportation	See 4.2
North Dakota Department of Transportation	Calibration truck used to provided several runs to calibrate front axle as well as GVW and axle spacing
Ohio Department of Transportation	At prezo sitees we have auto cal. turned on. Prezo sites are calibrated using 1 test truck of known weight. Bending plate & load cell sites are calibrated using 2 trucks. We normally make enough passes to verify the WIM is accurate and functioning properly. This could be as few as 5 & as many of 15 passes per lane.
Oklahoma Department of Transportation	
Oregon Department of Transportation	We use samples from the normal stream of traffic. Most often weights from the WIM are compared to weights from in-station static scale for 20 consecutive trucks. The % difference is calculated, and adjustments made accordingly.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	During installation use test trucks and then later calibration weigh all truck on road with motor carries static scale and compare each truck weight to wim scale
Texas Department of Transportation	
Vermont Department of Transportation	

Virginia Department of Transportation	At sites near a weigh station, we use trucks selected from the traffic stream. At other sites, test trucks are used.						
Washington Department of Transportation	A class 9 truck makes several passes (minimum of 5) over a lane to establish a baseline. From that baseline a recalibration factor is established. Then a minimum of 5 more passes are done. A final calibration number is established from those passes.						
Wisconsin Department of Transportation							
Wyoming Department of Transportation	A test truck (FHWA classification 9 loaded to greater than 67k lbs) makes 10 passes over each lanes sensors at average site speed. The trucks static GVM is compared to the 10 pass average WIM GVM and adjustments are performed from these results.						
systems to check data accuracy?							
--	--	--	--	--	--	--	--
State							
Alaska Department of Transportation	No						
Arkansas Department of Transportation							
California Department of Transportation	No						
Connecticut Department of Transportation	Yes. Through the office checks and the LTPP checks conducted by the FHWA Regional contractors.						
Delaware Department of Transportation							
Florida Department of Transportation	Yes						
Georgia Department of Transportation	No						
Hawaii Department of Transportation	No						
Idaho Department of Transportation	Yes. This is a daily ongoing part of our WIM maintenance and processing program.						
Illinois Department of Transportation	NR						
Indiana Department of Transportation	Yes						
Iowa Department of Transportation	Yes						
Kansas Department of Transportation	No						
Louisiana Department of Transportation	Yes						
Maine Department of Transportation							
Maryland Department of Transportation	NR						
Massachusetts Department of Transportation	NR						
Michigan Department of Transportation	Yes						
Minnesota Department of Transportation	Yes						
Mississippi Department of Transportation	Yes						
Missouri Department of Transportation	Yes						
Nebraska Department of Transportation							
Nevada Department of Transportation	Yes						
New Jersey Department of Transportation	Yes						
New Mexico Department of Transportation	Yes						
New York Department of Transportation	Yes						
North Dakota Department of Transportation	No. Still under development.						
Ohio Department of Transportation	Yes. TKO						
Oklahoma Department of Transportation							
Oregon Department of Transportation	Yes. A trouble Report system.						
Pennsylvania Department of Transportation							
South Dakota Department of Transportation	Yes						
Texas Department of Transportation							
Vermont Department of Transportation							
Virginia Department of Transportation	Yes						
Washington Department of Transportation	Yes						
Wisconsin Department of Transportation							
Wyoming Department of Transportation	The procedures explained in Section 4.1 assure data quality.						

*Question 4.5 Do you have a Quality Assurance Program in place for your WIM systems to check data accuracy?

Question 5.1 What specialized software do you use for data handling and processing of WIM data?						
State						
Alaska Department of Transportation	We use the provided software from IRD to test the validity of the data and then the data is uploaded into a "homegrown" Oracle database where it is then available to other Alaska Department of Trapportation officials and officer					
Arkansas Department of Transportation						
California Department of Transportation	IRD office/CT Wim/Infotek Validation Pro					
Connecticut Department of Transportation	Vendor software – Mikros. IRD (International Road Dynamics) software the comes with the purchased systems. The LTPP data processing/flagging software is run by after our data is submitted to the FHWA Regional contractor.					
Delaware Department of Transportation						
Florida Department of Transportation	Polling and processing use custom written software. The California CTWIM software is used for analysis.					
Georgia Department of Transportation	VTRIS					
Hawaii Department of Transportation	IRD Data Analysis Software Rev.C, IRD Office Rev. 7.5.0, PAT Reporter 100, PAT Reporter 200, TVT, VTRIS, in house developed data processing macros					
Idaho Department of Transportation	Currently installing the TrafLab Software system for traffic data management and processing – which includes WIM data. TrafLab is provided by Trancite Systems of Boise, Idaho.					
Illinois Department of Transportation	NR					
Indiana Department of Transportation	We predominately utilize the Chaparral System's TRADAS 3 Software data management. We will also utilize IRD's Office software to validate data to create summary reports and data exports.					
Iowa Department of Transportation	We use Peek TOPS software for data handling and processing.					
Kansas Department of Transportation	Vendor software, TRADAS, VTRIS, several in- house programs					
Louisiana Department of Transportation	International Road Dynamics proprietary software.					
Maine Department of Transportation						
Maryland Department of Transportation	NR					
Massachusetts Department of Transportation	NR					
Michigan Department of Transportation	MDOT developed software – Truck Weight Information System (TWIS). This program imports, conducts gross validity checks, and reports how much data did not pass those validity checks.					
Minnesota Department of Transportation	IRD proprietary software					
Mississippi Department of Transportation	For QA\QC we have an in-house program that was written to do some basic checks as mentioned above. As of this momentfor data reporting we use VTRIS. We are moving toward a commercial software called WIM NET for QA\QC and data reporting.					
Missouri Department of Transportation	WIM data is processed through our Traffic Data Analysis Software where it is factored and made available to our transportation community via our Transportation Management System.					

Nebraska Department of Transportation						
Nevada Department of Transportation	Tradas					
New Jersey Department of Transportation	IRD Office software is used for generating various reports; Vehicle Travel Information System (VTRIS) is used for processing, editing, and storing processed data for submission to the FHWA and generating the various W-Tables; K- Edit is used for viewing and editing huge ASCII files; and Microsoft Office is used for tabulating different summary tables.					
New Mexico Department of Transportation	TRADAS 3 (Traffic Data System) by Chaparral.					
New York Department of Transportation	'Trafman', in-house software (TCE (CC)).					
North Dakota Department of Transportation	Vendors software (IRD/PAT) along with in-house programs in Access, Excel					
Ohio Department of Transportation	Vendor software to download, report, and generate TMG files. TKO to QC all data & reports for customer data requests.					
Oklahoma Department of Transportation						
Oregon Department of Transportation	Unix					
Pennsylvania Department of Transportation						
South Dakota Department of Transportation	In house developed Client server software					
Texas Department of Transportation						
Vermont Department of Transportation						
Virginia Department of Transportation	 Oracle database, 2) an in-house developed application which loads the data into the database, MS Excel spreadsheet for the data quality graphs, 4) MS Access front end which produces TMG-W files. 					
Washington Department of Transportation	SAS, SPF/SE, Microsoft excel, Brio, Access					
Wisconsin Department of Transportation						
Wyoming Department of Transportation	Software provided by the WIM vendor. FHWA "VTRIS" program.					

whom do you distribute the results?	
State	
Alaska Department of Transportation	We analyze the data for errors and equipment failures. The data is then put on the Oracle database and can be viewed and used by any employee of DOT&PF
Arkansas Department of Transportation	
California Department of Transportation	Yes/Analysis of errors and class/wt percentages, internal distribution.
Connecticut Department of Transportation	Yes – check volume, classification and weight. Provide data to FHWA, CT-DOT Pavement Management, and CT-DOT Systems Inventory.
Delaware Department of Transportation	
Florida Department of Transportation	Yes. We look at gross vehicle weight distributions, steering axle weight, and tandem axle spacing for Class 09 vehicles. This information is kept in- house.
Georgia Department of Transportation	We do not currently analyze the data on a regular basis. We have done one special study for our Bridge Office regarding posted bridges.
Hawaii Department of Transportation	WIM data is analyzed for overweight vehicles, with the results being distributed to HDOT's design, lab, and bridge design sections.
Idaho Department of Transportation	Results are compared to previous months and years for the same site. Our software also has a broad range of data editing parameters. Weights and spacings are both analyzed. We provide WIM data based reports to a broad range of data clients including maintenance and design people, as well as private retailers and vendors.
Illinois Department of Transportation	NR
Indiana Department of Transportation	Not internally. We provide a monthly download of WIM data to Purdue University and to our research section. They perform their own analysis.
Iowa Department of Transportation	We analyze our WIM data using Vehicle Travel Information System(VTRIS). Factors we use when analyzing data are vehicle weights, ESAL's, percentage of errors in the data and gross vehicle weight distribution. We distribute the data to other departments with the Iowa Dept. of Transportation, FHWA and LTPP.
Kansas Department of Transportation	ESAL rates for Pavement Design. Overweight rates for Enforcement
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR

Question 5.2 Do you analyze your WIM data? What factors do you analyze? To whom do you distribute the results?

Michigan Department of Transportation	We review overweight trucks to determine
	percentage overweight by single axle, tandem and
	gloss weights. Motor Carrier Division of the State
	reports We calculate ESAL values for the existing
	navement. We can also perform ESAL estimates
	for a site using various pavement types and
	thickness. Planners responsible for traffic
	forecasting and working with Pavement Design
	engineers have direct access to this information
	and the "what if" ESAL calculations.
Minnesota Department of Transportation	Damage from overweight vehicles, ESALs that are
	over design limits and ESALs by vehicle class.
	FHWA, traffic forecasting, pavement design,
	pavement management.
Mississippi Department of Transportation	Yes. We use WIM data to derive our ESAL factors,
	and we will be using our WIM data to implement
	the new Pavement Design Guide. We report WIM
	data to FHWA on a monthly basis. Some of our
	bridge division, research division, and
	enforcement
Missouri Department of Transportation	We utilize our WIM data for mechanistic pavement
	design and for the calculation of ESALS relating to
	our pavement warranty program. We also utilize
	the data to determine tonnage hauled. We
	regularly provide data to the Missouri State
	Highway Patrol in the enforcement of overweight
	hauling as well.
	We also work with FHWA to have sites assessed
	for LIPP. And, we send all our WIM and class
	Design Program'
Nebraska Department of Transportation	
Nevada Department of Transportation	This was described previously
New Jersey Department of Transportation	Yes Classification, Weight, Speed and Volume
	information are all analyzed for integrity of data.
	Results are not distributed and used internally in
	deciding if information is good or not, or if
	equipments needs maintenance.
New Mexico Department of Transportation	Yes, Volume and Classification Data,. WIM Data
	sent to TWS and LTPP. Front axle factor 10K -
	12K, FHWA.
New York Department of Transportation	Minimal. Our biggest customer is the FHWA and
	that consists of reporting required by and detailed
North Delivite Demontry out of Transmosterian	In the FHWA Traffic Monitoring Guide
NOTITI DAKOTA Department of Transportation	- day of week information is shared with North
	Dakota Highway Patrol
Ohio Department of Transportation	Yes-front axle weights average FSAI 's load
	spectrum, GVW by class curves. over weight by
	vehicle type. Pavement design, the public,
	planning & programming sections use our data
	regularly.
Oklahoma Department of Transportation	

Oregon Department of Transportation	Yes – for my purpose I look specifically at axle weight/spacing, classification, GVW. In addition, WIM data is currently distributed to; ODOT – Highway Division ODOT – Bridge Section ODOT – Engineering Section Oregon State University School of Engineering Portland State University Scholl of Engineering
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Yes we analyze data, weights, gross weights, axle spacings, truck type(Federal Classification Scheme F), Esal's, see below
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	We look for calibration drift and other errors in the WIM data. This information is shared with our installation and maintenance contractor and hardware vendors.
Washington Department of Transportation	Yes, 4 vs 7card, high volume hours, peak periods, lane info, Truck % increase/Decrease, Lane info, Zero hours, shift in patterns, site history compare of trends from other sites.
Wisconsin Department of Transportation	
Wyoming Department of Transportation	FHWA vehicle type classification and ESAL calculations are reported to WYDOT's traffic analysis section.

Question 5.3 Is your WIM data currently used for the following?					
State					
Alaska Department of Transportation					
Arkansas Department of Transportation					
California Department of Transportation					
Connecticut Department of Transportation					
Delaware Department of Transportation					
Florida Department of Transportation					
Georgia Department of Transportation					
Hawaii Department of Transportation					
Idaho Department of Transportation					
Illinois Department of Transportation					
Indiana Department of Transportation					
Iowa Department of Transportation					
Kansas Department of Transportation					
Louisiana Department of Transportation					
Maine Department of Transportation					
Maryland Department of Transportation					
Massachusetts Department of Transportation					
Michigan Department of Transportation					
Minnesota Department of Transportation					
Mississippi Department of Transportation					
Missouri Department of Transportation					
Nebraska Department of Transportation					
Nevada Department of Transportation					
New Jersey Department of Transportation					
New Mexico Department of Transportation					
New York Department of Transportation					
North Dakota Department of Transportation					
Ohio Department of Transportation					
Oklahoma Department of Transportation					
Oregon Department of Transportation					
Pennsylvania Department of Transportation					
South Dakota Department of Transportation					
Texas Department of Transportation					
Vermont Department of Transportation					
Virginia Department of Transportation					
Washington Department of Transportation					
Wisconsin Department of Transportation					
Wyoming Department of Transportation					

State	
Alaska Department of Transportation	No
Arkansas Department of Transportation	
California Department of Transportation	NR
Connecticut Department of Transportation	Yes. For pavement, management purposes.
Delaware Department of Transportation	
Florida Department of Transportation	No
Georgia Department of Transportation	No
Hawaii Department of Transportation	No
Idaho Department of Transportation	Yes. We use both monthly and annual reports to track truck weight trends in Idaho.
Illinois Department of Transportation	NR
Indiana Department of Transportation	No. Our research Section is currently performing this analysis on our data.
Iowa Department of Transportation	No
Kansas Department of Transportation	Yes. Annual truck weight data publication has trend analysis
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	No. Not yet. We are starting to develop some site reports to monitor trends and data quality. We have one Pavement Performance Warranty project where we have tracked the accumulated FSAL's and truck volumes for a little over a year.
Minnesota Department of Transportation	No
Mississippi Department of Transportation	No
Missouri Department of Transportation	Yes. Tons hauled
Nebraska Department of Transportation	
Nevada Department of Transportation	No
New Jersey Department of Transportation	Yes. Classification reports by site are available on the NJDOT's website. We have also provided information for various studies to Rutgers University and the New Jersey Institute of Technology (NJIT) and to other traffic professionals.
New Mexico Department of Transportation	No
New York Department of Transportation	Yes. Minimal and typically for a specific location and time period to satisfy a particular program area need.
North Dakota Department of Transportation	No
Ohio Department of Transportation	Yes. GVW by functional class, loading by industry, loadings that change by year.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Yes. Truck trend data is considered for pending highway overlay or bridge work.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	No
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	No

Question 5.4 Have you used WIM data to investigate truck weight trends in your state? If yes, please explain (please also include references to any reports).

Washington Department of Transportation	Yes. The weigh data that is collected is used in the development of the state freight and goods report
Wisconsin Department of Transportation	
Wyoming Department of Transportation	No

Question 5.5 Has your state used WIM data for bridge design applications / bridge live load modeling? If yes, please explain (please also include references to any reports).

State	
Alaska Department of Transportation	No
Arkansas Department of Transportation	
California Department of Transportation	Yes. Caltrans has started using WIM data for bridge design recently.
Connecticut Department of Transportation	No. Based loads permitted through the state.
Delaware Department of Transportation	
Florida Department of Transportation	No
Georgia Department of Transportation	No
Hawaii Department of Transportation	No
Idaho Department of Transportation	Yes. We provide some commercial vehicle weight data and reports to our bridge design people.
Illinois Department of Transportation	NR
Indiana Department of Transportation	No. The data is not provided directly to them. However through Purdue University or our research section they maybe utilizing the data.
Iowa Department of Transportation	No
Kansas Department of Transportation	No
Louisiana Department of Transportation	No
Maine Department of Transportation	
Maryland Department of Transportation	NR
Massachusetts Department of Transportation	NR
Michigan Department of Transportation	No. Not to my knowledge.
Minnesota Department of Transportation	No
Mississippi Department of Transportation	No
Missouri Department of Transportation	No
Nebraska Department of Transportation	
Nevada Department of Transportation	No
New Jersey Department of Transportation	No
New Mexico Department of Transportation	No
New York Department of Transportation	
North Dakota Department of Transportation	No
Ohio Department of Transportation	Yes. Maumee River crossing design & I think for a few other applications a few years back.
Oklahoma Department of Transportation	
Oregon Department of Transportation	Yes – currently the ODOT Bridge Section is conducting an analysis for Bridge re-design, and engineering standards.
Pennsylvania Department of Transportation	
South Dakota Department of Transportation	Unknown
Texas Department of Transportation	
Vermont Department of Transportation	
Virginia Department of Transportation	No
Washington Department of Transportation	No atleast not to our knowledge
Wisconsin Department of Transportation	
Wyoming Department of Transportation	Not to my knowledge

Question 1.4 Please fill out the following table providing information for each mainline WIM site. Use additional sheets as required.

Alaska Department of Transportation

WIM Site ID	Route	AADT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)
Seward	Seward Hwy	5000	Bending Plate	IRD	September 2003	Fall 05	4	4	Yes	No
Tudor	Tudor Road	2000	Bending Plate	IRD	August 2003	Fall 05	4	4	Yes	No
Glenn	Glenn Hwy	6000	Bending Plate	IRD	July 2003	Fall 05	6	1	No	Yes
Port of Anchorage	Ocean Dock Road	950	Bending Plate	IRD	June 2001	Fall 05	2	2	Yes	No
Minnesota	Minnesota Drive	2000	Bending Plate	IRD	June 2001	Fall 05	5	5	Yes	No
Fox	Steese Hwy	500	Bending Plate	IRD	August 2005	Fall 05	2	2	Yes	Yes
Tok	Alaska Hwy	120	Bending Plate	IRD	August 2005	Fall 05	2	2	Yes	Yes
Chulitna	Parks Hwy	300	Piezo	IRD TC540W	Fall 2004	Aug 05	2	2	Yes	No

California Department of Transportation

Compilation of Table In-Progress

Connecticut Department of Transportation

							Number		WIM in both	Near a
		Combined					of	Number	Travel	Weigh
WIM Site ID		Directional			Date	Date Last	Traffic	of WIM	Directions?	Station
(Town)	Route	ADTT	Sensor Type	Vendor	Installed	Calibrated	Lanes	Lanes	(Yes/No)	(Yes/No)
Glastonbury	2	46500	MSI(Portable)	IRD	10/6/2003	10/6/2003	4	4	Yes	No
Winchester	8	13000	Phillips	Phillips	8/25/2003	8/25/2003	4	4	Yes	No
Windsor	20	45200	MSI	IRD	6/30/2003	6/30/2003	4	4	Yes	No
Montville	32	12700	MSI	IRD	7/28/2003	7/28/2003	2	2	Yes	No
New Britain	72	62400	MSI	IRD	8/25/2003	8/25/2003	6	6	Yes	No
Middlebury	84	62500	MSI	IRD	12/10/2003	12/10/2003	4	4	Yes	No
Farmington	84	85900	MSI	IRD	5/13/2003	5/13/2003	6	6	Yes	No
Manchester	84	113500	MSI	IRD	12/1/2003	12/1/2003	8	8	Yes	No
Wallingford	91	82300	MSI	IRD	8/27/2003	8/27/2003	6	6	Yes	No
Wethersfield	91	147900	MSI	IRD	11/18/2003	11/18/2003	8	8	Yes	No
Windsor	91	130900	MSI	IRD	7/7/2003	7/7/2003	8	8	Yes	No
Windsor	91	88800	MSI	IRD	7/9/2003	7/9/2003	7	7	Yes	No
Madison	95	62000	MSI	IRD	11/18/2003	11/18/2003	4	4	Yes	No
Cheshire	691	47300	Phillips	Phillips	9/10/2003	9/10/2003	4	4	Yes	No
Killingly	695	3900	Phillips	Phillips	9/3/2003	9/3/2003	4	4	Yes	No
Danbury(State Line)	84	76000	MSI	IRD	8/20/2003	8/20/2003	4	4	Yes	Yes
Union(State Line)	84	33200	MSI	IRD	12/1/2003	12/1/2003	6	6	Yes	Yes
Enfield(State Line)	91	94400	MSI	IRD	8/27/2003	8/27/2003	6	6	Yes	No
Thompson(State										
Line)	395	23400	MSI	IRD	9/3/2003	9/3/2003	4	4	Yes	No

YEAR 2003:

Weigh-In-Motion data collection is conducted on a rotating basis throughout the state. Equipment is used to collect data for a period of 48 hours once every three years with the exception being state lines which are collected for a period of 48 hours every year. Calibration is conducted using known typical vehicles from the traffic stream and typically known weight ranges.

YEAR 2004:

							Number		WIM in both	Near a
		Combined					of	Number	Travel	Weigh
WIM Site ID		Directional	Sensor		Date	Date Last	Traffic	of WIM	Directions?	Station
(Town)	Route	ADTT	Type	Vendor	Installed	Calibrated	Lanes	Lanes	(Yes/No)	(Yes/No)
Colchester	2	32500	MSI	IRD	9/27/2004	9/27/2004	4	4	Yes	No
Mansfield	6	22300	MSI	IRD	8/30/2004	8/30/2004	4	4	Yes	No
Harwinton	8	24100	MSI	IRD	6/7/2004	6/7/2004	4	4	Yes	No
Waterford	85	26900	MSI	IRD	6/21/2004	6/21/2004	4	4	Yes	No
Manchester	384	57600	MSI	IRD	9/27/2004	9/27/2004	8	8	Yes	No
Bolton	384	26500	MSI	IRD	9/14/2004	9/14/2004	4	4	Yes	No
Montville	395	58400	MSI	IRD	8/30/2004	8/30/2004	4	4	Yes	No
Danbury(State Line)	84	70600	MSI	IRD	6/14/2004	6/14/2004	4	4	Yes	Yes
Union(State Line)	84	45600	MSI	IRD	11/16/2004	11/16/2004	6	6	Yes	Yes
Greenwich(State										
Line)	95	130800	MSI	IRD	5/17/2004	5/17/2004	6	6	Yes	Yes
Thompson(State										
Line)	395	22800	MSI	IRD	7/12/2004	7/12/2004	4	4	Yes	No

Weigh-In-Motion data collection is conducted on a rotating basis throughout the state. Equipment is used to collect data for a period of 48 hours once every three years with the exception being state lines which are collected for a period of 48 hours every year. Calibration is conducted using known typical vehicles from the traffic stream and typically known weight ranges.

YEAR 2005:

							Number		WIM in both	Near a
		Combined					of	Number	Travel	Weigh
WIM Site ID		Directional	Sensor		Date	Date Last	Traffic	of WIM	Directions?	Station
(Town)	Route	ADTT	Type	Vendor	Installed	Calibrated	Lanes	Lanes	(Yes/No)	(Yes/No)
Brideport	8	84400	MSI	IRD	8/9/2005	8/9/2005	6	6	Yes	No
Shelton	8	67000	MSI	IRD	10/26/2005	10/26/2005	4	4	Yes	No
Berlin	15	28000	MSI	IRD	11/14/2005	11/15/2005	4	4	Yes	No
Windsor Locks	20	49500	MSI	IRD	7/19/2005	7/20/2005	4	4	Yes	No
Danbury(Exits 6-7)	84	123400	MSI	IRD	11/1/2005	11/1/2005	6	6	Yes	No
North Haven	91	121200	MSI	IRD	9/19/2005	9/19/2005	8	8	Yes	No
Wethersfield	91	151400	MSI	IRD	11/30/2005	11/30/2005	8	8	Yes	No
Darien	95	152300	MSI	IRD	7/25/2005	7/25/2005	7	7	Yes	No
Norwalk	95	129900	MSI	IRD	9/19/2005	9/19/2005	6	6	Yes	No
Plainfield	95	28000	MSI	IRD	10/18/2005	10/18/2005	4	4	Yes	No
Danbury(State Line)	84	65200	MSI	IRD	11/8/2005	11/8/2005	4	4	Yes	Yes
Greenwich(State										
Line)	95	130100	MSI	IRD	7/25/2005	7/25/2005	6	6	Yes	Yes
Thompson(State										
Line)	395	24400	MSI	IRD	7/11/2005	7/11/2005	4	4	Yes	No

Weigh-In-Motion data collection is conducted on a rotating basis throughout the state. Equipment is used to collect data for a period of 48 hours once every three years with the exception being state lines which are collected for a period of 48 hours every year. Calibration is conducted using known typical vehicles from the traffic stream and typically known weight ranges.

WIM Site ID	Route	ADTT	Sensor	Vendor	Date	Date Last	# of Traffic	# of	WIM in	Near a
Site ID			Туре		Instaneu	Cambrated	lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
LTPP	CT 2	23900	Quartz-	Kistler/	Fall 1997	June 2005	4	4	Y	No
090600			Piezo	IRD			(2-DIR)			
LTPP	I-84	90700	Quartz-	Kistler/	July 2003	June 2005	3	1	N	No
095001			Piezo	IRD					WB only	(20 mi)
LTPP	I-84	111500	Quartz-	Kistler/	July 2003	June 2005	3	1	N	No
094008			Piezo	IRD					WB only	
LTPP	CT 117	9900	Quartz-	Kistler/	July 2003	June 2005	1	1	N	No
091803			Piezo	IRD	-				NB only	

1 IVI I a Depar anone or 11 anopor anor	\mathbf{F}	lorida	Departmen	t of Tr	ansportation
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									WIM IN BOTH	NEAR A
							# OF	# OF	TRAVEL	WEIGH
WIM			SENSOR		DATE	DATE LAST	TRAFFIC	WIM	DIRECTIONS ?	STATION ?
SITE ID	ROUTE	ADTT	TYPE	VENDOR	INSTALLED	CALIBRATED	LANES	LANES	(YES/NO)	(YES/NO)
128	US-27	23487	KISTLER	IRD/PAT	12/3/2004	12/21/2004	4	1	NO	NO
192	SR-20	1852	KISTLER	IRD/PAT	12/10/2004	2/25/2005	2	1	NO	NO
194	I-75	8500	KISTLER	IRD/PAT	*********	*********	6	1	NO	NO
217	I-95	89303	KISTLER	IRD/PAT	1/20/2005	4/6/2005	6	1	NO	NO
219	SR-85	14232	KISTLER	IRD/PAT	2/10/2005	2/24/2005	4	1	NO	NO
220	I-10	29128	KISTLER	IRD/PAT	6/8/2005	9/14/2005	4	1	NO	YES
223	SR-407	6662	KISTLER	IRD/PAT	3/28/2005	4/7/2005	2	1	NO	NO
224	I-75	72500	KISTLER	IRD/PAT	1/4/2005	2/22/2005	6	1	NO	NO
9901	I-10	26373	KISTLER	IRD/PAT	5/30/2001	1/23/2003	4	4	YES	YES
9904	I-75	63375	KISTLER	IRD/PAT	10/20/2005	1/11/2006	6	4	YES	YES
9905	I-95	71310	KISTLER	IRD/PAT	11/10/2005	12/20/2005	6	4	YES	YES
9907	US-231	14996	BL	IRD/PAT	6/10/1998	1/22/2003	4	4	YES	NO
9909	US-19	13192	BL	IRD/PAT	11/2/2001	8/11/1997	4	4	YES	NO
9913	TPK	37093	KISTLER	IRD/PAT	12/6/1994	10/22/2002	4	4	YES	NO
9914	I-295	64390	KISTLER	IRD/PAT	11/14/2003	*******	4	4	YES	NO
9916	US-29	33438	BL	IRD/PAT	5/7/2002	*****	4	4	YES	NO
9917	US-41	16554	B.PLATE	IRD/PAT	5/2/2002	8/5/1997	4	2	NO	NO
9918	US-27	15802	BL	IRD/PAT	1/12/2001	*****	4	4	YES	NO
9919	I-95	38059	BL	IRD/PAT	1/30/2003	10/31/2003	4	4	YES	NO
9920	I-75	44109	KISTLER	IRD/PAT	5/14/2003	9/11/2003	4	4	YES	YES
9921	US-1	17837	KISTLER	IRD/PAT	3/21/2003	7/10/2003	4	2	YES	NO
9922	I-275	78282	BL	IRD/PAT	12/10/2002	12/19/2002	6	6	YES	NO
9923	I-95	75139	B.PLATE	IRD/PAT	3/29/2004	5/20/2004	4	2	YES	NO
9925	US-92	16429	B.PLATE	IRD/PAT	7/1/1990	7/15/2004	4	2	YES	NO
9926	I-75	126547	B.PLATE	IRD/PAT	6/1/1990	10/31/2002	6	4	YES	NO
9927	SR-546	14064	B.PLATE	IRD/PAT	9/28/1990	6/5/1997	4	4	YES	NO
9928	I-10	20112	KISTLER	IRD/PAT	12/7/1994	5/15/2002	4	4	YES	YES
9929	US-1	13105	B.PLATE	IRD/PAT	4/11/2003	7/14/2004	4	2	NO	NO
9930	US-1	53300	BL	IRD/PAT	3/21/2003	*****	6	6	YES	NO
9931	TPK	36301	KISTLER	IRD/PAT	10/4/1996	*****	4	2	YES	NO
9934	SR-821	81727	BL	IRD/PAT	6/3/2002	*****	7	7	YES	NO
9935	US-27	8220	KISTLER	IRD/PAT	3/20/2003	7/9/2003	4	2	YES	NO
9936	I-10	20838	BL	IRD/PAT	1/30/2003	2/24/2003	4	4	YES	NO
9937	SR-87	12690	B.PLATE	IRD/PAT	5/16/1996	*****	4	4	YES	NO
9939	US-331	2161	B.PLATE	IRD/PAT	10/25/1996	*****	2	2	YES	NO
9940	SR-267	8453	B.PLATE	IRD/PAT	3/25/1998	*****	4	4	YES	NO
9942	SR-85	4278	B.PLATE	IRD/PAT	6/9/1998	*****	2	2	YES	NO
9943	US-90	4943	B.PLATE	IRD/PAT	6/10/1998	*****	2	2	YES	NO
9944	SR-69	1589	B.PLATE	IRD/PAT	8/14/1998	*****	2	2	YES	NO
9946	SR-363	2161	B.PLATE	IRD/PAT	8/18/1998	****	2	2	YES	NO

Hawaii Department of Transportation

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions?	Near a Weigh Station
CIDE	20	500	D ' /		1004	11/2005	2	2	(Yes/No)	(Yes/No)
CIZE	30	598	Loop	IRD	1994	11/2005	2	2	Ŷ	IN
S8R	19	1455	Piezo / Loop	IRD	1994	11/2005	2	2	Y	N
S9	11	2652	Piezo / Loop	IRD	1994	11/2005	2	2	Y	N
C202B	64	2272	Bending Plate	PAT	1988	11/2005	6	5	N	Y
H41W	H-3	1577	Bending Plate	PAT	1996	11/2005	4	4	Y	N
10W	95	5759	Bending Plate	IRD	1/2003	11/2005	4	4	Y	N
C7L	H-1	11,000	Piezo / Loop	IRD	2/2006	2/2006	13	12	Y	N

Idaho Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
Downey	I-15	7900	Piezzo	ECM	June, 1996	ongoing	4	All	Yes	No
			&loop					lanes		
Mass Rocks	I-86	6300	Piezzo	ECM	June, 1995	ongoing	4	All	Yes	No
			&loop					lanes		
Rigby	US-20	18000	Piezzo	ECM	June, 1996	ongoing	4	All	Yes	No
		1.0.0.0	&loop					lanes		
Wolf Lodge	1-90	13000	Piezzo	ECM	Sept, 1997	ongoing	4	All	Yes	No
G 1	1.04	6600	&loop		X 1 1004		1	lanes	37	*7
Cotteral	1-84	6600	Piezzo	ECM	July, 1994	ongoing	4	All	Yes	Yes
Minn	LIC OF	10000	&loop Diama	ECM	Sant 1005		2	lanes	Vaa	Na
Iviica	03-93	10000	Plezzo	ECM	Sept, 1995	ongoing	2	All	res	NO
Samuals	US 05	8800	Piozzo	ECM	Sopt 1005	ongoing	2		Vas	No
Samuels	05-95	8800	loop	LUM	Sept, 1995	oligonig	2	lanes	105	NO
Black	I_8/	18000	Piezzo	FCM	June 1995	ongoing	1		Ves	No
Canyon	1 04	10000	&loop	Lewi	Julie, 1995	ongoing		lanes	105	110
Flatton	US-93	5300	Piezzo	ECM	July, 1995	ongoing	2	All	Yes	No
1 milliop	0.0 70	2200	&loop	2011	<i>vary</i> , <i>1</i> , <i>2</i> , <i>y</i> , <i>z</i>	ongoing	-	lanes	100	110
Filer	US-30	6100	Piezzo	ECM	July, 1995	ongoing	2	All	Yes	No
			&loop		5	0 0		lanes		
GTown	US-30	4000	Piezzo	ECM	July, 1995	ongoing	2	All	Yes	No
			&loop					lanes		
Mesa	US-95	2100	Piezzo	ECM	May, 1995	ongoing	2	All	Yes	No
			&loop					lanes		
Parma	US-95	6100	Piezzo	IRD	Aug, 2005	ongoing	4	All	Yes	No
			&loop					lanes		
Hammett	I-84	13500	Piezzo	IRD	July, 2005	ongoing	4	All	Yes	No
			&loop					lanes		
Dubois	I-15	2800	Piezzo	IRD	July, 2003	ongoing	4	All	Yes	No
41.1	110.05	17000	&loop		L COC (lanes		
Alpine	US-95	17000	Piezzo	IRD	June, 2004	ongoing	2	All	Yes	No
			&loop					lanes		1

Indiana Department of Transportation

									WIM	
						Date Last	Traffic	WIM	Both	Near Weigh
Station	Route/Location	ADTT	Sensors	Vendor	Date Installed	Calibrated	Lanes	Lanes	Dir	Station
					Not readily					Not readily
1000	US 41 SB RM 199.9	769	2P, 1 D	IRD	Available	2006	4	2	Ν	Available
					Not readily					Not readily
1100	I 65 NB MM 175.9	11186	4P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
1200	I 74 EB MM 5.2	6016	8SLC	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
1300	I 70 WB MM 7.5	n/a	4P,2D	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
2000	I 69 SB MM 137.9	n/a	8SLC	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
2100	US 24 WB RM 87.6	1542	8P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
2200	US 27 SB RM 100.2	1928	1BP	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
2300	I 69 SB MM 68.3	15424	2P	IRD	Available	2006	4	4	Y	Available
	US 24 WB RM				Not readily					Not readily
2400	158.1	3643	4SLC	IRD	Available	2006	2	2	Y	Available
					Not readily					Not readily
3000	SR 332 WB RM 0.5	1279	2P,1D	IRD	Available	2006	4	1	Ν	Available
	SR 37 SB RM				Not readily					Not readily
3100	172.25	4117	1VBP	IRD	Available	2006	4	1	Ν	Available
					Not readily					Not readily
3200	US 31 NB RM 125.7	2774	8P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
3300	I 465 SB MM 10.0	n/a	12P	IRD	Available	2006	6	6	Y	Available
					Not readily					Not readily
3400	I 65 NB MM 102.5	15025	12P	IRD	Available	2006	6	6	Y	Available

3500,										
3510,										
3520,					Not readily					Not readily
3530	I 465 NB MM 42.4	n/a	24SLC	IRD	Available	2006	12	12	Y	Available
					Not readily					Not readily
3600	I 70 EB MM 108.0	13875	8SLC	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
3700	I 70 EB MM 155.5	n/a	6P	IRD	Available	2006	4	4	Y	Available
4000,										
4010,										
4020,	I 80 / I 94 EB MM				Not readily					Not readily
4030	6.0	n/a	20SLC	IRD	Available	2006	10	10	Y	Available
					Not readily					Not readily
4100	I 65 NB MM 218.4	n/a	4P	IRD	Available	2006	4	2	Y	Available
4200,					Not readily					Not readily
4210	I 65 NB MM 253.7	n/a	12SLC	IRD	Available	2006	6	6	Y	Available
			8SLC /		Not readily					Not readily
4300	I 94 EB MM 38.0	13411	4P	IRD	Available	2006	6	6	Y	Available
	I 80 / 94 WB MM				Not readily					Not readily
4400	13.4	18791	12P	IRD	Available	2006	6	6	Y	Available
					Not readily					Not readily
4500	SR 2 WB RM 65.2	995	8P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
4600	US 31 NB RM 217.0	n/a	2P	IRD	Available	2006	4	1	Ν	Available
					Not readily					Not readily
4700	SR 49 NB RM 35.3	3969	8P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
5000	SR 37 SB RM 96.7	2791	2P	IRD	Available	2006	4	1	Y	Available
					Not readily					Not readily
5100	I 65 SB MM 79.1	n/a	8SLC	IRD	Available	2006	4	4	Y	Available
	US 50 WB RM				Not readily					Not readily
5200	137.4	1173	4P	IRD	Available	2006	2	2	Y	Available
					Not readily					Not readily
5300	I 74 EB MM 169.8	8161	4P	IRD	Available	2006	4	2	Y	Available

					Not readily					Not readily
5400	I 64 EB MM 117.0	7437	4P	IRD	Available	2006	4	2	Y	Available
5500,					Not readily					Not readily
5510	I 65 NB MM	13569	16SLC	IRD	Available	2006	8	8	Y	Available
5600,					Not readily					Not readily
5610	I 65 NB MM	12694	12SLC	IRD	Available	2006	6	6	Y	Available
					Not readily					Not readily
6000	US 50 EB RM 24.1	2118	2P	IRD	Available	2006	2	2	Y	Available
					Not readily					Not readily
6100	I 64 EB MM 27.9	5318	4P	IRD	Available	2006	4	2	Y	Available
					Not readily					Not readily
6200	I 64 EB MM 54.8	2308	2P	IRD	Available	2006	4	1	Ν	Available
					Not readily					Not readily
6300	SR 62 WB RM 12.5	1365	1BP	IRD	Available	2006	4	1	Ν	Available
					Not readily					Not readily
6400	SR 66 EB RM 18.7	492	8P	IRD	Available	2006	4	4	Y	Available
					Not readily					Not readily
6500	I 164 WB MM 2.2	2434	1BP / 2P	IRD	Available	2006	4	2	Y	Available
					Not readily					Not readily
6600	SR 66 WB RM 47.7	947	12P	IRD	Available	2006	6	6	Y	Available
	I 80/90 WB MM				Not readily					Not readily
7300	32.0	10947	8P	IRD	Available	2006	4	4	Y	Available
	I 80/90 WB MM				Not readily					Not readily
7320	71.6	n/a	8P	IRD	Available	2006	4	4	Y	Available
	I 80/90 WB MM				Not readily					Not readily
7340	79.4	n/a	8P	IRD	Available	2006	4	4	Y	Available

P=Piezo BP= Bending Plate VBP= Vaulted Bending Plate SLC= Single Load Cell D= Dynax

Iowa Department of Transportation

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)
190100	US 61	864	B/L	Measurem ent Specialist	1992		4	1	No	No
190200	US 65	3229	B/L	Measurem ent Specialist	1995		4	4	Yes	No
190600	I 35	5947	B/L	Measurem ent Specialist	1990		4	4	Yes	Yes
190700	I 35	4635	B/L	Measurem ent Specialist	1992		4	4	Yes	No
191044	US 20	4458	B/L	Measurem ent Specialist	1990		4	1	No	No
193006	US 30	1229	B/L	Measurem ent Specialist	1991		4	1	No	No
193009	I 380	6199	B/L	Measurem ent Specialist	1990		6	1	No	No
193028	US 218	2948	B/L	Measurem ent Specialist	1991		4	1	No	No
193033	US 218	2246	B/L	Measurem ent Specialist	1990		4	4	Yes	No

ADTT is based on 2004 data.

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)
193055	US 20	1616	B/L	Measurem ent Specialist	1991		4	1	No	No
195042	I 35	3871	B/L	Measurem ent Specialist	1991		4	4	Yes	No
196049	I 80	11260	B/L	Measurem ent Specialist	1991		4	4	Yes	No
196150	IA 196	249	B/L	Measurem ent Specialist	1990		2	2	Yes	No
199116	I 35	4864	B/L	Measurem ent Specialist	1991		4	4	Yes	No
199126	I 80	9134	B/L	Measurem ent Specialist	1991		4	4	Yes	No
Agency	US 34	832	B/L	Measurem ent Specialist	2004		2	2	Yes	No
Benton	I 380	3261	B/L	Measurem ent Specialist	1990's		4	4	Yes	No

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)
Brchnl	US 18	1825	B/L	Measureme nt Specialist	2004		4	4	Yes	No
Charles	US 218	1350	B/L	Measureme nt Specialist	2004		4	4	Yes	No
Dundee	IA 13	261	B/L	Measureme nt Specialist	2002		2	2	Yes	No
Eldrdg	US 61	2049	B/L	Measureme nt Specialist	1992		4	4	Yes	No
Iafall	US 20	1117	B/L	Measureme nt Specialist	2004		4	4	Yes	No
Iowa21	IA 21	141	B/L	Measureme nt Specialist	1990's		2	2	Yes	No
Mville	I 80	9371	B/L	Measureme nt Specialist	2001		4	4	Yes	Yes
Newham	US 18	844	B/L	Measureme nt Specialist	2004		4	4	Yes	No
Sibley	IA 60	749	B/L	Measureme nt Specialist	2004		2	2	Yes	No
Swedes	US 218	1657	B/L	Measureme nt Specialist	1190's		4	4	Yes	No
Wmburg	I 80	9817	B/L	Measureme nt pecialist	1991		4	4	Yes	No

Kansas Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
201005	K-68	830	Piezo	ITC			4	2	No	No
201006	US-166	435	Piezo	ECM			4	2	No	No
203013	I-435	5810	Piezo	ECM			6	3	No	No
203015	US-50	2240	Piezo	ECM			2	2	Yes	No
204016	US-24	800	Piezo	ITC			4	2	No	No
204052	US-36	1270	Piezo	ITC			4	2	No	No
204053	I-70	6615	Piezo	ECM			6	3	No	No
206026	K-96	860	Piezo	ECM			4	2	No	No
0USKI5	K-27	400	Kistler	IRD			2	2	Yes	No
200200	I-70	4010	Load Cell	Toledo			4	2	No	No
200100	US-54	1580	Bending	IRD			2	2	No	No
			Plate							
Portable	Various		Capacitanc	AVIAR		Each set		1	No	
			e Mat							

Louisiana Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
	I-12		Load Cell	IRD	1999	As needed	2	1	Y	Y
	I-10		Load Cell	IRD	2004	"	2	1	Y	Y
	I-20		Load Cell	IRD	1999	"	2	1	N	N

Michigan Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions ?	Station
									(Yes/No)	(Yes/No)
011	M-6		Bending	PAT	2004	2004	6	6	Yes	No
016	US-23		Piezo	PAT	1995	AutoCal	2	2	Yes	No
020	US-127		Piezo	PAT	1999	AutoCal	4	4	Yes	No
022	I-96		Piezo	PAT	1998	AutoCal	6	6	Yes	No
023	US-23		Piezo	PAT	1998	AutoCal	4	4	Yes	No
026	I-75		Piezo	PAT	2001	AutoCal	4	4	Yes	No
028	I-75		Piezo	PAT	1999	AutoCal	4	4	Yes	No
032	US-23		Quartz	PAT	1991	AutoCal	4	4	Yes	No
034	I-75		Quartz	PAT	2005	2006	8	6	Yes	No
036	US-131		Piezo	PAT	1999	AutoCal	4	4	Yes	No
040	US-127		Piezo	PAT	2001	AutoCal	4	4	Yes	No
044	I-69		Quartz	PAT	2003	2006	4	4	Yes	Yes
052	I-96		Piezo	PAT	1999	AutoCal	4	4	Yes	Yes
054	I-94		Quartz	PAT	1997	2006	4	4	Yes	Yes
058	US-12		Quartz	PAT	2001	2001	2	2	Yes	No
071	I-94		Piezo	PAT	1997	AutoCal	6	6	Yes	No
075	I-75		Piezo	PAT	1998	AutoCal	4	4	Yes	No
079	US-31		Quartz	PAT	2000	2001	4	4	Yes	No
084	I-75		Piezo	PAT	1999	AutoCal	6	6	Yes	Yes
090	US-2		Piezo	PAT	1997	AutoCal	2	2	Yes	No
093	US-2		Piezo	PAT	1999	AutoCal	2	2	Yes	No
102	M-46		Bending	PAT	1999	1999	2	2	Yes	No
107	I-275		Piezo	PAT	1997	AutoCal	6	6	Yes	No
119	US-10		Piezo	PAT	1990	AutoCal	4	4	Yes	No
122	US-131		Piezo	PAT	1990	AutoCal	4	4	Yes	No
126	M-57		Piezo	PAT	1990	AutoCal	2	2	Yes	No
131	I-196		Quartz	PAT	1997	1997	4	4	Yes	No

141	I-275	Piezo	PAT	1997	AutoCal	6	6	Yes	No
143	I-96	Piezo	PAT	1999	AutoCal	6	6	Yes	No
144	I-75	Piezo	PAT	2000	AutoCal	6	6	Yes	No
145	I-275	Piezo	PAT	2000	AutoCal	6	6	Yes	No
149	I-94	Piezo	PAT	1996	AutoCal	4	4	Yes	No
150	I-94	Piezo	PAT	1996	AutoCal	4	4	Yes	No
152	I-94	Piezo	PAT	1995	AutoCal	6	6	Yes	No
155	US-2	Piezo	PAT	1997	AutoCal	4	4	Yes	No
167	US-23	Bending	PAT	2000	2001	4	4	Yes	No
173	US-24	Quartz	PAT	2002	2002	4	4	No	No
308	I-69	Piezo	PAT	1990	AutoCal	4	4	Yes	No
312	I-96	Quatz	PAT	1990	2002	4	4	Yes	Yes
315	US-23	Quartz	PAT	1994	2006	4	4	Yes	No
317	US-127	Quartz	PAT	2005	2006	4	4	Yes	No

Minnesota Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of WIM	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	Lanes	both	Weigh
							lanes		Travel	Station
									Directions?	(Yes/No)
	TO 4			*** 1	••••	2 00 f			(Yes/No)	
25	194	7000	Quartz	Kıstler	2000	2006	4	2	No	No
26	135	3600	Quartz	Kistler	2003	2003	4	4	Yes	No
27	TH60	800	Quartz	Kistler	2004	2004	4	2	No	No
29	TH53	900	Quartz	Kistler	2004	2004	4	4	Yes	No
30	TH61	530	Quartz	Kistler	2004	2004	4	4	Yes	No
31	TH7	500	Quartz	Kistler	2005	2005	4	2	No	No

Mississippi Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
ID							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
18	US 61		BL	ITC		3/22/2005	4	4	Y	Ν
46	I-55		BL	ITC		2/27/2006	4	4	Y	N
77	I-55		BL	ITC		1/19/2006	4	4	Y	Y
115	US 82		BL	ITC		1/26/2006	4	4	Y	N
	I-55		Bending	ITC		2/7/2006	4	4	Y	N
121			Plates							
123	US 61		BL	ITC		4/29/2005	4	4	Y	Ν
124	US 49		BL	ITC		1/20/2006	4	4	Y	Ν
125	US 82		BL	ITC		4/28/2005	4	4	Y	N
126	US 49		BL	ITC		4/28/2005	2	2	Y	Y
127	US 78		BL	ITC		4/27/2005	4	4	Y	N
128	I-59		BL	ITC		5/5/2005	4	4	Y	N
129	I-10		BL	ITC		5/5/2005	4	4	Y	N
130	I-10		BL	ITC		5/4/2005	4	4	Y	N
131	I-55		BL	ITC		1/25/2006	4	4	Y	N
132	SR 27		BL	ITC		5/10/2005	2	2	Y	N

Missouri Department of Transportation

WIM Site	Route	AADT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
182	IS29	12980	LP/PIEZO	IRD	09/1999	12/2005	4	2	YES	NO
188	IS35	13740	LP/PIEZO	IRD	09/1992	10/27/2004	4	2	YES	NO
200	US63	6289	LP/PIEZO	IRD	10/2005	10/2005	4	4	YES	NO
202	US63	6835	LP/PIEZO	IRD	03/1939	10/2005	4	4	YES	NO
302	US61	5459	LP/PIEZO	IRD	06/1946	12/2005	4	2	YES	NO
420	IS435	11144*	LP/PIEZO	IRD	07/1992	12/01/2004	2	1	NO	NO
441	US65	4679*	LP/PIEZO	IRD	07/1995	12/03/2004	2	1	NO	NO
500	IS70	32998	LP/PIEZO	IRD	07/1992	01/26/2004	4	2	YES	NO
610	IS55	18285	LP/PIEZO	IRD	03/1946	12/13/2005	4	2	YES	NO
740	US71	6812*	LP/PIEZO	IRD	07/1992	11/16/2004	2	1	NO	NO
760	IS44	11674*	LP/PIEZO	IRD	07/1991	11/17/2004	2	1	NO	YES
920	US60	2551*	LP/PIEZO	IRD	11/1990	12/2005	2	1	NO	NO
930	IS44	14647*	LP/PIEZO	IRD	10/1992	11/23/2004	2	1	NO	NO

* = AADT for WIM direction only

Nevada Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
008009	IR-015	4500	Kistler	IRD/PAT	08-01-03	05-26-05	4	4	Y	Ν
018019	IR-080	2300	B. Plate	PAT	04-05-95	07-06-03	4	2	Y	Ν
022023	IR-080	2200	Kistler	IRD/PAT	10-21-03	08-25-05	4	4	Y	Y
034035	IR-215	3000	Kistler	IRD/PAT	02-03-06	02-03-06	8	8	Y	N

New Jersey Department of Transportation

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic	# of WIM	WIM in both Travel	Near a Weigh
							lanes	Lanes	Directions? (Yes/No)	Station (Yes/No)
001	US-1	57089	BL	IRD	Sep 2005	Sep 2005	6	6	YES	NO
01A	US-1	53436	NB- PHILIPPS SB - BL	IRD	1999	Jun 2005	4	4	YES	NO
01D	US-1&9	77442	BL	IRD	2003	May 2003	7	7	NO	NO
09A	US-9	47411	PHILIPPS	IRD	1997	AUG 2002	4	4	YES	NO
015	NJ-15	42574	PHILIPPS	IRD	1993	DEC 2004	4	4	YES	NO
017	NJ-17	32768	BENDING PLATE	IRD	1995	OOC -1998	6	3	NO	YES
18B	NJ-18	35941	BL	IRD	2002	APR 2005	4	4	YES	NO
018	NJ-18	44894	PHILIPPS	IRD	2001	AUG 2003	4	4	YES	NO
18D	NJ-18	32503	BL	IRD	2005	APR 2005	5	5	YES	NO
022	US-22	29555	PHILIPPS	IRD	1996	JUL 2004	4	4	YES	NO
22B	US-22	38361	PHILIIPS	IRD	2001	AUG 2004	4	4	YES	NO
023	NJ-23	28232	BL	IRD	1993	APR 2005	4	4	YES	NO
31B	NJ-31	13253	BL	IRD	1997	JUN 2004	2	2	YES	NO
31D	NJ-31	20801	BL	IRD	2004	SEP 2004	4	4	YES	NO
031	NJ-31	23876	PHILIPPS	IRD	1994	00C-2003	4	4	YES	NO
31C	NJ-31	18722	PHILIPPS	IRD	1998	SEP 2002	2	2	YES	NO

033	NJ-33	25292	BL	IRD	1997	SEP 2004	5	4	YES	NO
034	NJ-34	34389	BL	IRD	2001	SEP 2005	4	4	YES	NO
34B	NJ-34	262863	PHILIPPS	IRD	2001	SEP 2005	4	4	YES	NO
40A	US-40	14005	BL	IRD	1997	OCT 2005	4	4	YES	YES
040	US-40	9538	PHILIPPS	IRD	1995	OCT 2004	2	2	YES	NO
40B	US-	31343	PHILIPPS	IRD	2002	OCT 2005	4	4	YES	NO
	40/322									
046	US-46	24054	BL	IRD	2001	APR 2004	4	4	YES	NO
052	NJ-52	23937	PHILIPPS	IRD	2002	APR 2005	4	4	YES	NO
55C	NJ-55	13600	PHILIPPS	IRD	2003	OCT 2005	4	2	NO	NO
551	NJ-55	29045	PHILIPPS	IRD	1993	OOC -1999	4	4	YES	NO
552	NJ-55	64245	PHILIPPS	IRD	1993	OCT 2005	4	4	YES	NO
068	NJ-68	5034	PHILIPPS	IRD	1997	JUL 2005	2	2	YES	NO
68A	NJ-68	12807	PHILIPPS	IRD	2002	MAY 2005	4	4	YES	NO
072	NJ-72	9425	PHILIPPS	IRD	1997	MAY 2005	2	2	YES	NO
72B	NJ-72	19926	PHILIPPS	IRD	2003	MAY 2005	4	4	YES	NO
073	NJ-73	19963	PHILIPPS	IRD	2003	OCT 2004	4	4	YES	NO
78A	I-78	76009	PHILIPPS	IRD	1994	OOC- 2000	6	6	YES	NO
78D	I-78	101485	BL	IRD	2003	OCT 2004	6	6	YES	NO
78B	I78	35540	BL	IRD	2000	OOC-2003	6	3	NO	NO
80A	I-80	54525	PHILIPPS	IRD	1995	OOC-2002	7	7	YES	YES
80B	I-80	111046	PHILIPPS	IRD	1994	OOC-2003	6	6	YES	NO
80C	I-80	136740	PHILIPPS	IRD	1995	OOC-1997	8	8	YES	NO
80D	I-80	163773	BL	IRD	1997	JUN 2004	12	12	YES	NO
095	I-95	53766	PHILIPPS	IRD	1993	OOC-2001	6	4	YES	NO
124	NJ-124	13327	BL	IRD	2004	JUN 2004	4	2	NO	NO
130	US-130	12658	BENDING	IRD	1997	OOC-2003	2	2	YES	YES
			PLATES							
13B	US-130	13933	BL	IRD	1999	JUL 2005	4	2	NO	YES
13A	US-130	31977	PHILIPPS	IRD	1999	AUG 2005	4	4	YES	NO
138	NJ-138	23411	BL	IRD	2003	AUG 2005	4	4	YES	NO
168	NJ-168	11539	PHILIPS	IRD	1997	JUN 2004	3	2	YES	NO
169	NJ-440	26974	BENDING	IRD	1997	OOC-1999	4	4	YES	NO

			PLATES							
195	I-195	48909	PHILIPPS	IRD	1993	JUN 2005	4	4	YES	NO
202	US-202	12657	PHILIPPS	IRD	1993	JUL 2004	4	4	YES	NO
206	US-206	14351	PHILIPPS	IRD	1997	OOC-2002	2	2	YES	NO
280	I-280	50274	PHILIPPS	IRD	1999	JUL 2005	6	3	NO	NO
A87	I-287	49554	PHILIPPS	IRD	1998	JUL 2005	6	3	NO	NO
287	I-287	56614	BL	IRD	1993	OOC-2004	4	4	YES	NO
I2S	I-295	30775	BENDING	IRD	1997	OOC-2004	4	4	YES	YES
			PLATES							
I2D	I-295	112769	BL	IRD	1997	JUL 2005	6	6	YES	NO
295	I-295	93815	BL	IRD	1993	JUL 2005	6	6	YES	NO
322	US-322	17811	BL	IRD	1997	JUN 2005	4	4	YES	NO
700	NJTPK	22123	PHILIPPS	IRD	1997	SEP 1997	4	2	NO	YES
CO0539	CO-539	10530	PHILIPPS	IRD	2000	MAY 2002	2	2	YES	NO
CO0551	CO-551	1293	PHILIPPS	IRD	1997	JUN 2002	2	2	YES	YES
CO0653	CO-653	8705	PHILIPPS	IRD	1997	JAN 1997	4	2	NO	NO
DRM	DOREM	8906	BL	IRD	2004	AUG 2004	2	2	YES	NO
	US AVE									
New Mexico Department of 7	Fransportation									
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WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
004	I-10	12821	Piezo / L	MS	1998	2005	4	4	Yes	Yes
300	I-25	6874	Piezo / L	MS	1998	2005	4	4	Yes	Yes
252	I-25	11034	Piezo / L	MS	2001	2004	4	4	Yes	No
B28	I-25	5889	Piezo / L	MS	1998		4	4	Yes	Yes
101	I-40	20020	Piezo / L	MS	2002	2003	4	4	Yes	Yes
201	I-40	18384	Piezo / L	MS	1998		4	4	Yes	No
B20	I-40	13124	Piezo / L	MS	1998		4	4	Yes	Yes
918	US 54	7592	Piezo / L	MS	2004		4	4	Yes	No
100	US 54	2312	Piezo / L	MS	2002	2004	2	2	Yes	Yes
202	US 62	2958	Piezo / L	MS	1998		4	4	Yes	No
919	US 70	6738	Piezo / L	MS	2003		4	4	Yes	No
921	US 70	5114	Piezo / L	MS	1991		4	4	Yes	No
916	US 70	2184	Piezo / L	MS	2003		4	4	Yes	No
007	US 84	31721	Piezo / L	MS	2005	2005	4	4	Yes	No
915	US 380	1404	Piezo / L	MS	2005		2	2	Yes	No
103	US 550	4825	IRD BP	IRD	2002	2002	4	4	Yes	No
102	US 550	4236	IRD BP	IRD	2002	2002	4	4	Yes	No
155	US 550	4990	IRD BP	IRD	2001	2001	4	4	Yes	No

New York Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of WIM	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	Lanes	both	Weigh
							lanes		Travel	Station
									Directions?	(Yes/No)
1000	4		D'		2002	2005	2	2	(Yes/No)	N
1800	4		Piezo	IRD/MSI	2002	2005	2	2	Yes	NO
12841	9106		Piezo	IRD/MSI	2005	2005	2	2	Yes	No
7181	2		Piezo	IRD/MSI	2001	2005	2	2	Yes	No
7100	I-87		Piezo	IRD/MSI	2001	2005	4	4	Yes	Yes
7381	I-81		Piezo	IRD/MSI	2005	2005	4	4	Yes	Yes
2680	8		Piezo	IRD/MSI	2001	2005	4	4	Yes	No
9580	I-88		Piezo	IRD/MSI	2001	2005	5	5	Yes	No
8382	I-84		Piezo	IRD/MSI	2001	2005	4	4	Yes	No
8280	I-84		Piezo	IRD/MSI	2001	2005	4	4	Yes	No
0199	I-95		Piezo	IRD/MSI	2003	N/A	6	6	Yes	No
0280	McGuiness		Piezo	IRD/MSI	2004	2005	4	4	Yes	No
	Blvd									
580	I-495		Piezo	IRD/MSI	2003	2005	6	6	Yes	No
0797	25		Piezo	IRD/MSI	2003	2005	2	2	Yes	No
3382	I-690		Piezo	IRD/MSI	2001	2005	2	2	Yes	No
3311	I-81		Piezo	IRD/MSI	2005	2005	2	2	Yes	No
9121	I-81		Piezo	IRD/MSI	2004	2005	2	2	Yes	No
4483	5		Piezo	IRD/MSI	2001	2005	4	4	Yes	No
6282	328		Piezo	IRD/MSI	2001	2005	4	4	Yes	No
4342	590		Piezo	IRD/MSI	2004	2005	6	6	Yes	No
5384	219		Piezo	IRD/MSI	2005	2005	4	4	Yes	No
5280	I-86		Piezo	IRD/MSI	2001	2005	4	4	Yes	No

North Dakota Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in	Near a
Site ID			Туре		Installed	Calibrated	Traffic	WIM	both Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
1	I-94	2000	Kistler	Kistler	2003	2003	2	2	NO	NO
			Quartz	Corp.						
2	US 85	600	"	"	2003	2003	1	1	NO	NO
3	US 281	1250	"	"	2003	2003	2	2	YES	YES
4	I-29	2600	"	"	2003	2003	2	2	NO	YES
5	US 2	950	"	"	2004	2004	2	2	NO	YES
6	I-29	1400	"	"	2004	"	2	2	NO	YES
7	I-94	7500	"	"	"	"	2	2	NO	YES
8	US 52	400	"	"	"	"	1	1	NO	NO
9	US 83	4500	"	"	"	"	4	4	YES	NO
10	US 2	1475	"	"	"	"	2	2	NO	NO
11	US 85	2075	"	"	"	"	2	2	YES	NO
12	US 52	1675	"	"	"	"	2	2	YES	NO

Ohio Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of WIM	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	Lanes	both	Weigh
							lanes		Travel Directions?	Station (Vos/No)
									(Yes/No)	(1 es/10)
056	SR47	900	Prezo	Peek	Summer 06	N/A	2	2	Y	N
065	IR75	20,510	Prezo	Peek	10/05	Spring 06	6	6	Y	N
535	IR75	9,631	Prezo	Peek	1999	04/04	6	6	Y	Ν
706	US20	819	Bending Plate	Pat/IRD	1997	06/05	4	2	Y	N
707	IR70	6,644	Prezo	Peek	1993	09/03	4	4	Y	Ν
708	IR270	12,751	Load Cell	MT	1994	04/04	6	4	Y	N
709	SR7	1,010	Load Cell	MT	1994	08/04	4	2	Y	N
710	US68	690	Load Cell	MT	1994	06/05	2	2	Y	Ν
711	IR675	7,420	Load Cell	MT	1994	05/05	4	2	Y	Ν
714	US33	1,556	Prezo	Peek	1995	07/03	4	2	Ν	Ν
715	IR71	11,470	Load Cell	MT	1995	05/05	4	2	Y	у
716	US33	1,520	Load Cell	MT	1995	10/04	4	2	Y	Ν
717	IR75	16,530	Load Cell	MT	1995	03/05	4	1	Ν	Y
718	IR75	17,870	Load Cell	MT	1995	03/05	6	4	Y	Ν
719	IR 75	18,430	Load Cell	MT	1995	03/05	4	1	Y	Y
721	US23	5,480	Load Cell	MT	1996	04/05	4	4	Y	Ν
722	SR 126	1,090	Load Cell	MT	1998	11/04	4	1	Ν	Ν
723	IR 270	3,179	Bending	Pat/IRD	1999	06/05	7	4	Y	Ν
724	11820	5 1 1 0	Praze	Dool	1000	04/02	2	2	V	N
724	US20	3,110	Prezo	Peek	1999	04/02	2	2	I V	IN N
726		4,555	Prozo	Pook	1999	03/05	4	4	I V	IN N
720	US 24	3,907	Prozo	Pook	1999	03/05	<u> </u>	<u> </u>	I V	IN N
722	US 23 ID 475	4,310	Prozo	Pool	1777	03/05	4	4	1 V	IN N
132	IK 4/J	0,730	riezo	геек	1777	03/03	4	4	1	IN

736	IR 75	12,538	Prezo	Peek	1999	11/03	4	4	Y	N
737	IR 75	14,375	Prezo	Peek	1999	11/03	4	4	Y	Ν
738	US 127	2,470	Prezo	Peek	1999	07/03	4	4	Y	Ν
740	County	8	Prezo	Peek	1996	07/03	4	4	Y	Ν
	Road									
743	IR 70	17,360	Prezo	Peek	2002	07/03	4	4	Y	Ν
745	IR 70	20,967	Prezo	Peek	2000	07/03	4	4	Y	Ν
752	IR 7-0	9,303	Prezo	Peek	2004	07/04	6	6	Y	Ν
754	IR 76	8,150	Prezo	Peek	2000	05/05	4	4	Y	Ν
755	IR 77	3,958	Prezo	Peek	2000	05/05	4	4	Y	Ν
757	IR 76	6,956	Prezo	Peek	2000	05/05	4	4	Y	Ν
760	SR 18	1,551	Prezo	Peek	2000	05/05	4	4	Y	Ν
762	IR 80	13,639	Prezo	Peek	2000	05/05	4	4	Y	Ν
763	SR 11	3,251	Prezo	Peek	2000	05/05	4	4	Y	Ν
764	SR 82	2,699	Prezo	Peek	2000	05/05	4	4	Y	Ν
766	IR 480	2,551	Prezo	Peek	2000	05/05	4	4	Y	Ν
768	US 62	490	Prezo	Peek	2003	07/05	2	2	Y	Ν
769	SR 104	750	Prezo	Peek	Summer	N/A	2	2	Y	Ν
					06					
770	IR 77	3,598	Prezo	Peek	2003	05/05	4	4	Y	Ν
771	SR 78	182	Prezo	Peek	2003	05/05	2	2	Y	Ν
772	SR 683	175	Prezo	Peek	2003	05/05	2	2	Y	Ν
773	SR 821	627	Prezo	Peek	2003	05/05	2	2	Y	Ν
774	SR 14	521	Prezo	Peek	2004	05/05	2	2	Y	Ν
775	IR 70	12,896	Prezo	Peek	2004	05/05	4	4	Y	Ν
776	SR 183	377	Prezo	Peek	2004	05/05	2	2	Y	Ν
777	IR 71	9,157	Prezo	Peek	2005	10/05	6	6	Y	N
778	US 30	3,609	Prezo	Peek	2005	10/05	4	4	Y	N
779	US 30	2,869	Load Cell	MT	2006	01/06	4	2	Y	N

Oregon Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in both	Near a
ID			Туре		Installed	Calibrated	Traffic	WIM	Travel	Weigh
							lanes	Lanes	Directions?	Station (Veg/Ne)
Wdbn S	SB I 5	5200	Single load	מא	Oct 07	Ian 06	3	2	Same direction	
w don S	SD 1-5	5200	cell	IKD	001 97	Jan 00	5	2	Same uncetion	105
Wdbn N	NB I-5	4900	SLC	IRD	June 98	Jan 06	3	2	Same direction	Yes
Wilbur	SB I-5	3200	SLC	IRD	June 00	Oct 05	2	1	Same direction	Yes
Booth	NB I-5	2900	SLC	IRD	June 00	May 06	2	1	Same direction	Yes
Ranch										
Ashl POE	NB I-5	3800	SLC	IRD	Aug 99	Apr 06	2	1	Same direction	Yes
Ashl SB	SB I-5	3200	SLC	IRD	Aug 99	Apr 06	2	1	Same direction	Yes
K Falls N	NB I-97	1600	SLC	IRD	June 00	Apr 06	2	1	Same direction	Yes
K Falls S	SB I-97	1200	SLC	IRD	June 00	Apr 06	2	1	Same direction	Yes
Bend	NB I-97	700	SLC	IRD	July 05	Feb 06	2	1	Same direction	Yes
J Butte N	NB I-97	700	SLC	IRD	June 00	Nov 05	2	1	Same direction	Yes
J Butte S	SB I-97	650	SLC	IRD	June 00	Nov 05	2	1	Same direction	Yes
CCL	EB I-84	3500	SLC	IRD	July 01	Mar 06	2	1	Same direction	Yes
Wyeth	WB I-84	3200	SLC	IRD	July 01	Mar 06	2	1	Same direction	Yes
E. Hill	WB I-84	1800	SLC	IRD	July 01	Apr 06	2	1	Same direction	Yes
LaGrande	EB I-84	1800	SLC	IRD	Oct 99	Apr 06	2	1	Same direction	Yes
Farewell Bend	WB I-84	2400	SLC	IRD	Aug 99	Apr 06	2	1	Same direction	Yes

Olds Ferry	EB	2100	SLC	IRD	Aug 99	Apr 06	2	1	Same direction	Yes
	I-84									
Umatilla	SB	2600	SLC	IRD	Oct 99	May 06	2	1	Same direction	Yes
	I-82									
Lowell	WB	1100	SLC	IRD	Aug 00	May 06	2	2	Same direction	Yes
	US-58				_					
Rocky Point	WB	850	SLC	IRD	Jan 01	Nov 05	2	1	Same direction	Yes
	US-30									
EB	EB	180	SLC	IRD	Nov 00	Mar 06	2	1	Same direction	Yes
Brightwood	US-26									
WB	WB	200	SLC	IRD	Nov 00	Mar 06	2	1	Same direction	Yes
Brightwood	US-26									

South Dakota Department of Transportation

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions?	Near a Weigh Station
801	SD 37	166	Blending	PAT	10/23/2001	7/16/2003	2	2	(Yes/No) Y	(Yes/No) n
802	US 18	68	Plate Blending Plate	PAT	10/01/1996	6/06/2002	2	2	Y	n
803	US 14	127	Blending Plate	PAT	10/15/1996	7/19/2005	2	2	Y	n
804	US 83	110	Blending Plate	PAT	09/01/1999	6/21/2005	2	2	Y	n
805	I 90	834	Blending Plate	PAT	10/15/1999	11/4/2004	4	4	Y	n
806	I 29	1143	Blending Plate	PAT	9/01/1999	7/7/2005	4	4	Y	n
807	I 90	1079	Blending Plate	PAT	9/16/2002	11/7/2005	4	4	Y	Y
808	SD 79	353	Blending Plate	PAT	11/2/2004	11/2/2004	4	2	N	N
809	I 29	2763	Blending Plate	IRD	2002	2002	4	2	N	у
810	US 212	75	Kistler Quartz	IRD	6/14/2005	6/14/2005	2	2	Y	n
901	I 90	1194	Blending Plate	PAT	9/19/1991	8/7/2003	4	2	N	у
903	US 12	440	Blending	PAT	7/22/1992	7/20/2004	4	2	Ν	n
909	US 14	134	Blending Plate	PAT	10/1/1996	6/17/2002	2	2	Y	Ν
910	I 29	503	Blending Plate	PAT	9/1/1999	7/27/2004	4	4	Y	У

Virginia Department of Transportation

WIM Site ID	Route	ADTT	Sensor Type	Vendor	Date Installed	Date Last Calibrated	# of Traffic lanes	# of WIM Lanes	WIM in both Travel Directions? (Yes/No)	Near a Weigh Station (Yes/No)
190050	I66 WB	17000	Quartz Piezo	Kistler/ Peek	4/14/2005	1/18/2006	2	2	No	No
140318	195 NB	17000	Quartz Piezo	Kistler/ Peek	6/15/2005	1/10/2006	2	2	No	Yes
040289	SR288	30000	Quartz Peizo	Kistler/ Peek	9/7/2005	11/17/2005	4	4	Yes	No

Washington Department of Transportation

WIM	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of	WIM in both	Near a
Site ID		(2005)	Туре		Installed	Calibrated	Traffic	WIM	Travel	Weigh
							lanes	Lanes	Directions?	Station
									(Yes/No)	(Yes/No)
B02	SR 012	20,677	PIEZO	IRD	12/90		4	4	YES	YES
B03	SR 395	13,301	PIEZO	IRD	12/90	5/24/05	4	4	YES	
B04	I-90	27,300	PIEZO	IRD	6/91		4	4	YES	YES
D1	I-405	141,573	PIEZO	IRD	11/91	7/27/05	6	4	YES	
D3	SR 512	90,949	PIEZO	IRD	8/92	7/25/05	6	6	YES	
P01	SR 002	20,619	PIEZO	IRD	3/92	7/19/05	4	4	YES	
P03	SR 097	11,372	PIEZO	IRD	4/93		4	4	YES	
P04	I-5	43,690	PIEZO	IRD	12/91	11/16/05	4	4	YES	
P05	SR 012	2,072	PIEZO	IRD	12/91	5/25/05	2	2	YES	
P06	SR 014	36,897	PIEZO	IRD	7/91	6/7/05	4	4	YES	
P07	SR 014	6,033	PIEZO	IRD	8/91	6/7/05	2	2	YES	
P08	I-082	23,448	PIEZO	IRD	8/91		4	4	YES	
P09	I-082	15,377	PIEZO	IRD	9/91		4	4	YES	
P10	I-090	9,823	PIEZO	IRD	9/91	5/5/05	4	4	YES	YES
P13	SR 195	4,758	PIEZO	IRD	4/92	6/6/06	2	2	YES	
P14	SR 195	3,119	PIEZO	IRD	4/92	6/6/06	2	2	YES	
P15	SR 195	8,738	PIEZO	IRD	4/92	5/5/04	4	4	YES	
P17	SR 221	1,945	PIEZO	IRD	6/92	5/24/05	2	2	YES	
P18	SR 101	2,627	PIEZO	IRD	12/92	9/15/05	2	2	YES	
P19	SR 522	41,957	PIEZO	IRD	12/91		4	4	YES	
P20	SR 018	52,611	PIEZO	IRD	3/92	7/26/05	4	4	YES	
P21	SR 009	11,427	PIEZO	IRD	10/92	9/14/05	2	2	YES	
P22	SR 097	2,036	PIEZO	IRD	3/93	7/20/05	2	2	YES	
P23	SR 097	3,927	PIEZO	IRD	3/93	7/20/05	2	2	YES	
P24	I-090	45,458	PIEZO	IRD	6/94	5/03/05	4	4	YES	YES
P28	SR 002	17,444	PIEZO	IRD	3/93	5/4/05	4	4	YES	
P29	I-082	43,334	PIEZO	IRD	9/93	7/19/05	4	4	YES	

P30	SR 027	6,412	PIEZO	IRD	8/95		2	2	YES	
P33	SR 290	7,834	PIEZO	IRD	7/03	5/3/05	2	2	YES	
P1	I-005	179,752	PIEZO	IRD	6/95	11/15/05	8	6	YES	
P3	I-005	189,529	PIEZO	IRD	8/91		9	7	YES	
P4	I-005	140,253	PIEZO	IRD	8/91	9/15/05	8	6	YES	
P6	SR-167	118,764	PIEZO	IRD	5/95	7/27/05	6	4	YES	
P7C	SR-395	6,953	KISTLER	IRD	3/98	1/18/06	4	4	YES	
P8	I-005	50,092	PIEZO	IRD	9/01		6	6	YES	

Wyoming Department of Transportation

WIM Site	Route	ADTT	Sensor	Vendor	Date	Date Last	# of	# of WIM	WIM in	Near a
ID			Туре		Installed	Calibrated	Traffic	Lanes	both	Weigh
							lanes		Travel	Station
									Directions?	(Yes/No)
									(Yes/No)	
LA0176	180	8800	Piezo	ECM	2001	2005	4	4	Yes	Yes
UI0177	I80	13340	Piezo	ECM	2001	2005	4	4	Yes	Yes
BH0173	WY310	1320	Piezo	ECM	1999	2006	2	2	Yes	No
160	I25	6060	Piezo	ECM	1997	2005	4	2	Yes	No
156	WY59	5030	Piezo	ECM	1998	2006	2	2	Yes	No