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Title 23 – Highways

Chapter III – National Highway Traffic Safety Administration, Department of Transportation

Part 1340 Uniform Criteria for State Observational Surveys of Seat Belt Use

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PART 1340—UNIFORM CRITERIA FOR STATE OBSERVATIONAL SURVEYS OF SEAT BELT USE

Authority: 23 U.S.C. 402; delegation of authority at 49 CFR 1.50.

Source: 76 FR 18056, Apr. 1, 2011, unless otherwise noted.

Subpart A—General

§ 1340.1 Purpose.

This part establishes uniform criteria for State surveys of seat belt use conducted under 23 U.S.C. 402, procedures for NHTSA approval of survey designs, and administrative requirements relating to State seat belt surveys.

§ 1340.2 Applicability.

This part applies to State surveys of seat belt use beginning in calendar year 2013 and continuing annually thereafter. However, a State may elect to conduct its calendar year 2012 seat belt use survey using a survey design approved under this part.

[77 FR 20551, Apr. 5, 2012]

§ 1340.3 Definitions.

As used in this part—

Access ramp means the segment of a road that forms a cloverleaf or limited access interchange.

Cul-de-sac means the closed end of a road that forms a loop or turn-around.

Non-public road means a road on which members of the general public are not allowed to drive motor vehicles.

Nonresponse rate means, for any survey variable, the percentage of unknown values recorded for that variable.

Observation site means the physical location where survey data are collected.

Passenger motor vehicle means a motor vehicle with a gross vehicle weight rating of less than 10,000 pounds, including a passenger car, pickup truck, van, minivan or sport utility vehicle.

Service drive means the segment of a road that provides access to businesses and rest areas.

Traffic circle means the segment of a road or intersection of roads forming a roundabout.

Unnamed road means a road, public or private, that has no name or number designation and is often a farm or logging road.

Vehicular trail means a road designed or intended primarily for use by motor vehicles with four-wheel drive.

Subpart B—Survey Design Requirements

§ 1340.4 In general.

This subpart sets forth the minimum design requirements to be incorporated in surveys conducted under this part.

§ 1340.5 Selection of observation sites.

(a) **Sampling frame requirements** —

(1) **County coverage.** The sampling frame from which observation sites are selected shall include counties or county-equivalents (including tribal territories), as defined by the U.S. Census Bureau, that account for at least 85 percent of the State's passenger vehicle occupant fatalities, provided that the average of the last three, four or five years, at the State's option, of available Fatality Analysis Reporting System (FARS) data or State fatality data approved by NHTSA shall be used to determine the State's passenger vehicle occupant fatalities.

(2) **Road coverage.**

(i) States shall select observation sites from a database of road inventories approved by NHTSA or provided by NHTSA.

- (ii) Except as provided in paragraph (a)(2)(iii) of this section, all roads in the State shall be eligible for sampling. The sampling frame may not be limited only to roads having a stop sign, stop light or State-maintained roads.
 - (iii) The sampling frame need not include: rural local roads, as classified by the Federal Highway Administration's Functional Classification Guidelines, in counties that are not within a Metropolitan Statistical Area (MSA), as published by the Office of Management and Budget; non-public roads; unnamed roads; unpaved roads; vehicular trails; access ramps; cul-de-sacs; traffic circles; or service drives.
- (b) **Sampling selection requirements.** The set of road segments selected for observation sites shall be chosen based on probability sampling, except that—
- (1) The specific observation site locations on the sampled road segments may be deterministically selected;
 - (2) An alternate observation site may be used to replace an observation site selected based on probability sampling if it is located in the same county or county-equivalent, and has the same roadway classification (e.g., local road segment, collector road segment) when using the protocol of substitution and rescheduling of observation sites pursuant to paragraph (c) of this section.
- (c) **Requirements for substitution and rescheduling of observation sites.** The survey design shall include at a minimum the following protocols:
- (1) **Protocol when observation site is temporarily unavailable for data collection.**
 - (i) Observers shall return to the observation site at another time provided that it is on the same day of the week and at same time of the day or select an alternate observation site, as described in paragraph (b)(2) of this section, provided the data are collected on the same day and at approximately the same time as the originally-scheduled observation site.
 - (ii) The original observation site must be used for future data collections.
 - (2) **Protocol when observation site is permanently unavailable for data collection.**
 - (i) Except as provided in paragraph (c)(2)(ii), another observation site shall be selected in accordance with paragraph (b) of this section.
 - (ii) If it is not feasible to select another observation site based on probability sampling for the current data collection, an alternate observation site, as described in paragraph (b)(2) of this section, may be selected, provided the data is collected on the same day and at approximately the same time as the originally-scheduled observation site.
 - (iii) For future data collections, another observation site must be selected based on probability sampling in accordance with paragraph (b) of this section.
- (d) **Precision requirement.** The estimated seat belt use rate must have a standard error of no more than 2.5 percentage points.

§ 1340.6 Assignment of observation times.

- (a) **Daylight hours.** All daylight hours between 7 a.m. and 6 p.m. for all days of the week shall be eligible for inclusion in the sample.

- (b) **Random assignment.** Except as provided in paragraph (c) of this section, the day-of-the-week and time-of-the-day shall be randomly assigned to observation sites.
- (c) **Grouping of observation sites in close geographic proximity.** Observations sites in close geographic proximity may be grouped to reduce data collection burdens if:
 - (1) The first assignment of an observation site within the group is randomly selected; and
 - (2) The assignment of other observations sites within the group is made in a manner that promotes administrative efficiency and timely completion of the survey.

§ 1340.7 Observation procedures.

- (a) **Data collection dates.** All survey data shall be collected through direct observation completely within the calendar year for which the Statewide seat belt use rate will be reported. Except as provided in § 1340.5(c), the survey shall be conducted in accordance to the schedule determined in § 1340.6.
- (b) **Roadway and direction(s) of observation –**
 - (1) **Intersections.** If an observation site is located at an intersection of road segments, the data shall be collected from the sampled road segment, not the intersecting road segment(s).
 - (2) **Roads with two-way traffic.** If an observation site is located on a road with traffic traveling in two directions, one or both directions of traffic may be observed, provided that—
 - (i) If only one direction of traffic is observed, that direction shall be chosen randomly;
 - (ii) If both directions of traffic are observed at the same time, States shall assign at least one person to observe each direction of traffic.
- (c) **Vehicle coverage.** Data shall be collected by direct observation from all passenger motor vehicles, including but not limited to passenger motor vehicles used for commercial purposes, passenger motor vehicles exempt from the State's seat belt use law and passenger motor vehicles bearing out-of-State license plates.
- (d) **Occupant coverage.** Data shall be collected by direct observation of all drivers and right front passengers, including right front passengers in booster seats, but excluding right front passengers in child safety seats. Observers shall record a person as—
 - (1) Belted if the shoulder belt is in front of the person's shoulder;
 - (2) Unbelted if the shoulder belt is not in front of the person's shoulder;
 - (3) Unknown if it cannot reasonably be determined whether the driver or right front passenger is belted.
- (e) **Survey data.** At a minimum, the seat belt use data to be collected by direct observation shall include—
 - (1) Seat belt status of driver;
 - (2) Presence of right front passenger; and
 - (3) Seat belt status of right front passenger, if present.
- (f) **Data collection environment.** When collecting seat belt survey data—
 - (1) Observers shall not wear law enforcement uniforms;

- (2) Police vehicles and persons in law enforcement uniforms shall not be positioned at observation sites;
- (3) Communications by signage or any other means that a seat belt survey is being or will be conducted shall not be present in the vicinity of the observation site.

§ 1340.8 Quality control.

- (a) **Quality control monitors.** Monitors shall conduct random, unannounced visits to no less than five percent of the observation sites for the purpose of quality control. The same individual shall not serve as both the observer and quality control monitor at the same observation site at the same time.
- (b) **Training.** Observers and quality control monitors involved in seat belt use surveys shall have received training in data collection procedures within the past twelve months. Observers and quality control monitors shall be trained in the observation procedures of § 1340.7 and in the substitution and rescheduling requirements of § 1340.5(c).
- (c) **Statistical review.** Survey results shall be reviewed and approved by a survey statistician, *i.e.*, a person with knowledge of the design of probability-based multi-stage samples, statistical estimators from such designs, and variance estimation of such estimators.

§ 1340.9 Computation of estimates.

- (a) **Data used.** Except as otherwise provided in this section, all data collected pursuant to § 1340.7(e) shall be used, without exclusion, in the computation of the Statewide seat belt use rate, standard error, and nonresponse rate.
- (b) **Data editing.** Known values of data contributing to the Statewide seat belt use rate shall not be altered in any manner.
- (c) **Imputation.** Unknown values of variables shall not be imputed unless NHTSA has approved the State's imputation procedure prior to data analysis.
- (d) **Sampling weights.** The estimation formula shall weight observed data by the sampling weights as required by the sample design and any subsequent adjustments.
- (e) **Sampling weight adjustments for observation sites with no usable data.** States shall include a procedure to adjust the sampling weights for observation sites with no usable data, including observation sites where no data were collected and observation sites where data were discovered to be falsified.
- (f) **Nonresponse rate.**
 - (1) Subject to paragraph (f)(2) of this section, the nonresponse rate for the entire survey shall not exceed 10 percent for the ratio of the total number of recorded unknown values of belt use to the total number of drivers and passengers observed.
 - (2) The State shall include a procedure for collecting additional observations in the same calendar year of the survey to reduce the nonresponse rate to no more than 10 percent if the nonresponse rate in paragraph (f)(1) of this section exceeds 10 percent.
- (g) **Variance estimation.**
 - (1) Subject to paragraph (g)(2) of this section, the estimated standard error, using the variance estimation method in the survey design, shall not exceed 2.5 percentage points.

- (2) If the standard error exceeds this threshold, additional observations shall be conducted in the same calendar year of the survey until the standard error does not exceed 2.5 percentage points.

Subpart C—Administrative Requirements

§ 1340.10 Submission and approval of seat belt survey design.

- (a) **Contents:** The following information shall be included in the State's seat belt survey design submitted for NHTSA approval:
 - (1) **Sample design.** The State shall—
 - (i) Define all sampling units, with their measures of size, as provided in § 1340.5(a);
 - (ii) Specify the data source of the sampling frame of road segments (observation sites), as provided in § 1340.5(a)(2)(i);
 - (iii) Specify any exclusions that have been applied to the sampling frame, as provided in § 1340.5(a)(2)(iii);
 - (iv) Define what stratification was used at each stage of sampling and what methods were used for allocation of the sample units to the strata;
 - (v) Specify the method used to select the road segments for observation sites as provided by § 1340.5(b).
 - (vi) List all observation sites and their probabilities of selection;
 - (vii) Explain how the sample sizes were determined, as provided in § 1340.5(d);
 - (viii) Describe how observation sites were assigned to observation time periods, as provided in § 1340.6; and
 - (ix) Identify the name and describe the qualifications of the State survey statistician meeting the requirements in § 1340.8(c).
 - (2) **Data collection.** The State shall—
 - (i) Define an observation period;
 - (ii) Specify the procedures to be implemented to reschedule or substitute observation sites when data collection is not possible on the date and time assigned, as provided in § 1340.5(c);
 - (iii) Specify the procedures for collecting additional data to reduce the nonresponse rate, as provided in § 1340.9(f)(2);
 - (iv) Describe the data recording procedures; and
 - (v) Specify the number of observers and quality control monitors.
 - (3) **Estimation.** The State shall—
 - (i) Describe how seat belt use rate estimates will be calculated;
 - (ii) Describe how variances will be estimated, as provided in § 1340.9(g);
 - (iii) Specify imputation methods, if any, that will be used, as provided in § 1340.9(c);

- (iv) Specify the procedures to adjust sampling weight for observation sites with no usable data, as provided in § 1340.9(e); and
 - (v) Specify the procedures to be followed if the standard error exceeds 2.5 percentage points, as required in § 1340.5(g).
- (b) **Survey design submission deadline.** For calendar year 2012, States shall submit proposed survey designs to NHTSA for approval no later than January 3, 2012. Thereafter, States should submit survey designs for NHTSA approval as specified in § 1340.11.

§ 1340.11 Post-approval alterations to survey design.

After NHTSA approval of a survey design, States shall submit for NHTSA approval any proposed alteration to their survey design, including, but not limited to, sample design, seat belt use rate estimation method, variance estimation method and data collection protocols, at least three months before data collection begins.

§ 1340.12 Re-selection of observation sites.

- (a) **Re-selection of observation sites.** States shall re-select observation sites using updated sampling frame data, as described in § 1340.5(a), no less than once every five years.
- (b) **Re-selection submission deadline.** States shall submit updated sampling frame data meeting the requirements of § 1340.5(a) for NHTSA approval no later than March 1 of the re-selection year.

§ 1340.13 Annual reporting requirements.

- (a) **Survey data.** States shall report the following information no later than March 1 of each year for the preceding calendar year's seat belt use survey, using the reporting form in appendix A to this part:
 - (1) Spreadsheet in electronic format containing the raw data for each observation site and the observation site weight;
 - (2) Statewide seat belt use rate estimate and standard error;
 - (3) Nonresponse rate for the variable "belt use," as provided in § 1340.9(f);
 - (4) Dates of the reported data collection;
 - (5) Observation sites, identified by type of observation site (*i.e.*, observation site selected in the original survey design, alternate observation site selected subsequent to the original survey design), and by characteristics of the observation site visit (*i.e.*, at least one vehicle observed, no vehicles observed); and
 - (6) Name of the State survey statistician meeting the qualification requirements, as provided in § 1340.8(c).
- (b) **Certifications by Governor's Highway Safety Representative.** The Governor's Highway Safety Representative (GR) or if delegated in writing, the Coordinator of the State Highway Safety Office, shall sign the reporting form certifying that—
 - (1) _____ has been designated by the Governor as the GR, and if applicable, the GR has delegated the authority to sign the certification in writing to _____, the Coordinator of the State Highway Safety Office;

- (2) The reported Statewide seat belt use rate is based on a survey design that was approved by NHTSA, in writing, as conforming to the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340;
- (3) The survey design has remained unchanged since the survey was approved by NHTSA; and
- (4) _____, a qualified survey statistician, reviewed the seat belt use rate reported in Part A (of the certification) and information reported in Part B and has determined that they meet the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR part 1340.

(c) [Reserved]

(d) **Audits.** NHTSA may audit State survey results and data collection. The State shall retain the following records for five years and make them available to NHTSA in electronic format within four weeks of request:

- (1) Computation programs used in the sample selection;
- (2) Computation programs used to estimate the Statewide seat belt use rate and standard errors for the surveys conducted since the last NHTSA approval of the sample design; and
- (3) Sampling frame(s) for design(s) used since the last NHTSA approval of the sample design.

Appendix A to Part 1340—State Seat Belt Use Survey Reporting Form

PART A: To be completed by the Governor's Highway Safety Representative (GR) or if applicable, the Coordinator of the State Highway Safety Office.

State: _____

Calendar Year of Survey: _____

Statewide Seat Belt Use Rate: _____

I hereby certify that:

- _____ has been designated by the Governor as the State's Highway Safety Representative (GR), and if applicable, the GR has delegated the authority to sign the certification in writing to _____, the Coordinator of the State Highway Safety Office.
- The reported Statewide seat belt use rate is based on a survey design that was approved by NHTSA, in writing, as conforming to the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340.
- The survey design has remained unchanged since the survey was approved by NHTSA.
- _____, a qualified survey statistician, has reviewed the seat belt use rate reported above and information reported in Part B and has determined that they meet the Uniform Criteria for State Observational Surveys of Seat Belt Use, 23 CFR Part 1340.

Signature

Date

Printed name of signing official

PART B—DATA COLLECTED AT OBSERVATION SITES

Site ID	Site type ¹	Date observed	Sample weight	Number of drivers	Number of front Passengers	Number of occupants ² belted	Number of occupants unbelted	Number of occupants with unknown belt use
Total								

Standard Error of Statewide Belt Use Rate^[3] _____

Nonresponse Rate, as provided in § 1340.9(f)

Nonresponse rate for the survey variable seat belt use: _____

^[1] Identify if the observation site is an original observation site or an alternate observation site.

^[2] Occupants refer to both drivers and passengers.

^[3] The standard error may not exceed 2.5 percent.