CHAPTER VI

UPDATING HPMS DATA

INTRODUCTION

This chapter provides information on updating basic HPMS data and the GIS/LRS data files and maps. HPMS data are to be updated on a regularly scheduled basis; continuous monitoring and updating are built into the process to assure the availability of timely and consistent information from all States.

The HPMS has been designed to permit updating with a minimum of effort. By systematically reporting and documenting changes as they occur, the data will not only be accurate and current, but States will also avoid periodic or sporadic workload requirements, which can be less efficient and disruptive. States are encouraged to set up ongoing mechanisms with both external (MPO, local authorities, etc.) and internal State highway agency offices to report changes as they occur. These should include internal State coordination between the HPMS staff and that of the State and MPOs, pavement management systems (PMS), traffic monitoring system, and other management systems and data collection activities.

GENERAL

All HPMS data are to be reported for the calendar year ending December 31. Updates to the HPMS data set may be made at any time for any data year; however, States are encouraged to make resubmittals on a timely basis when significant changes or errors are discovered.

UPDATING UNIVERSE AND SAMPLE DATA

Universe and sample data items are required to be reported annually in accordance with the guidelines outlined in Chapter IV. In general, traffic or condition-related data items are updated annually or on a 2- to 3-year cycle as indicated in the following table. Where a multi-year update cycle is shown, updated data may be collected all in one year or collection may be spread out over the several years in the cycle. Other data, such as year of improvement, lane width, shoulder type, etc., will change only as a result of physical improvement to the section.

All changes should be reported for the data year in which the change occurred; this is particularly important when reporting changes that result from highway improvements. The State should establish a mechanism that will provide these data to its road inventory system as soon as a construction project is completed and will ensure that all affected data items are updated at the same time.

Data Update Cycle

No.	Data Item	Update Cycle
1	Year of Data	Annual
2	State Code	No change permitted
3	Reporting Units – Metric or English	Change as necessary
4	County Code	No change permitted
5	Section Identification	Change as necessary
6	Is Standard Sample	Software coded
7	Is Donut Sample	Software coded
8	State Control Field	Change as necessary
9	Is Section Grouped?	Change as necessary
10	LRS Identification	Change as necessary
11	LRS Beginning Point	Change as necessary
12	LRS Ending Point	Change as necessary
13	Rural/Urban Designation	Change as necessary
14	Urbanized Area Sampling Technique	Change as necessary
15	Urbanized Area Code	Change as necessary
16	NAAQS Nonattainment Area Code	Change as necessary
17	Functional System Code	Change as necessary
18	Generated Functional System Code	Software calculated
19	National Highway System (NHS)	Change as necessary
20	Planned Unbuilt Facility	Change as necessary
21	Official Interstate Route Number	Change as necessary
22	Route Signing	Change as necessary
23	Route Signing Qualifier	Change as necessary
24	Signed Route Number	Change as necessary
25	Governmental Ownership	Change as necessary
26	Special Systems	Change as necessary
27	Type of Facility	Change as necessary
28	Designated Truck Route	Change as necessary
29	Toll	Change as necessary
30	Section Length	Change as necessary
31	Donut Area Sample AADT Volume Group Identifier	Software calculated from updated AADT; if AADT not reported, change as necessary
32	Standard Sample AADT Volume Group Identifier	Software calculated from updated AADT; if AADT not reported, change as necessary
33	AADT	Annual

No.	Data Item	Update Cycle
34	Number of Through Lanes	Change when section improved
35	Measured Pavement Roughness (IRI)	2-year cycle; also change when section improved
36	Present Serviceability Rating (PSR)	2-year cycle; also change when section improved
37	High Occupancy Vehicle (HOV) Operations	Change as necessary or when section improved
38-46	Highway Surveillance Systems	Change as necessary or when section improved
47	Sample Identifier	No change permitted
48	Donut Area Sample Expansion Factor	Software calculated
49	Standard Sample Expansion Factor	Software calculated
50	Surface/Pavement Type	Change when section improved
51	SN or D	Change when section improved
52	General Climate Zone	Software coded; change if necessary
53	Year of Surface Improvement	Change when section improved
54	Lane Width	Change when section improved
55	Access Control	Change when section improved
56	Median Type	Change when section improved
57	Median Width	Change when section improved
58	Shoulder Type	Change when section improved
59	Shoulder Width – Right	Change when section improved
60	Shoulder Width – Left	Change when section improved
61	Peak Parking	Change as necessary or when section improved
62	Widening Feasibility	Change as necessary
63-68	Curves by Class	Change when section improved
69	Horizontal Alignment Adequacy	Software coded when curve data reported; if curve data not reported, change when section improved
70	Type of Terrain	Change when section improved
71	Vertical Alignment Adequacy	Software coded when grade data reported; if grade data not reported, change when section improved
72-77	Grades by Class	Change when section improved
78	Percent Passing Sight Distance	Change when section improved
79	Weighted Design Speed	Software calculated
80	Speed Limit	Change as necessary
81	Percent Peak Single Unit Trucks	Change as necessary; 3-year maximum cycle
82	Percent Average Daily Single Unit Trucks	Change as necessary; 3-year maximum cycle

No.	Data Item	Update Cycle
83	Percent Peak Combination Trucks	Change as necessary; 3-year maximum cycle
84	Percent Average Daily Combination Trucks	Change as necessary; 3-year maximum cycle
85	K-Factor	3-year cycle
86	Directional Factor	3-year cycle
87	Number of Peak Lanes	Change as necessary or when section improved
88	Left Turning Lanes/Bays	Change as necessary or when section improved
89	Right Turning Lanes/Bays	Change as necessary or when section improved
90	Prevailing Type of Signalization	Change as necessary
91	Typical Peak Percent Green Time	Change as necessary
92	Number At-Grade Intersections -- Signals	Change as necessary or when section improved
93	Number At-Grade Intersections -- Stop Signs	Change as necessary or when section improved
94	Number At-Grade Intersections -- Other or No Controls	Change as necessary or when section improved
95	Peak Capacity	Software calculated
96	Volume/Service Flow Ratio (V/SF)	Software calculated
97	Future AADT	3-year cycle
98	Year of Future AADT	3-year cycle

UPDATING SUMMARY DATA

Population and land area data should be reported annually and reflect the current urbanized and small urban area boundaries as adjusted and approved by FHWA. Population estimates should be for the HPMS data reporting year; for those years between decennial censuses, the population estimate should be based on either the most recent census estimate or on the decennial Census figures adjusted for recent growth using other Federal, State, or local information.

Summary vehicle classification data should be reported annually. Information from the sites should be updated based on at least one-third of the panel each year. All functional systems must be monitored on a 3-year cycle.

UPDATING LRS DATA

After the initial reporting of LRS data, only updated information is required on an annual basis. LRS reporting status should be noted in the comment file, annually. Update inventory route, subroute number, beginning KMPT/MPT, and ending KMPT/MPT for universe and sample roadway sections annually on an as-needed basis (see Chapter IV, Items 5 and 10). Unless the lengths of the sections change or KMPTs/MPTs are reestablished, there will be no need to change this information. If the section lengths

change or the KMPTs/MPTs are reestablished, the extent of kilometerpoint (milepoint) changes will depend on the LRS system used [i.e., how often kilometerpoints (milepoints) are reset to zero].

Network control LRS data should be updated in accordance with the following:

LRS Submittal Option 1; Maps and Computer Files

New inventory route and node maps for future submittals are only necessary if there are changes to the State's base highway network or LRS. Further, only those maps that cover the portion of the State's highway network that has changed need to be submitted. New or altered nodes and links should be shown along with adjacent, unchanged nodes and links. Once established, and at the State's request, FHWA will supply the necessary portions of the NHPN as either a paper map or a GIS data file for review and change purposes. Realignments or new routes that have been built also should be shown, color-coded by functional system. The alignment of new routes or realignments should be shown on these maps at a locational accuracy associated with a map scale of 1:100,000 or better, for digitizing purposes. The approximate alignment of proposed routes should be displayed.

The node data file and inventory route link data file need only be submitted if records have changed. The annual update need only consist of the records of those nodes and links that have been changed, added, or deleted. This will be indicated in Item 4, Record Status, for each record within each node data file and inventory route link data file. For those records that have changed, the appropriate items should be changed to reflect the current characteristics of the node or link. However, for any given change, the appropriate records for both the node and link files should be submitted (even if the change occurred only for the node or only within the link). A route that changes alignment, because of construction, should have its old links and nodes (only those affected by the realignment) deleted and new links and nodes added to reflect its new alignment. The same is true for a route that is realigned onto an existing highway that was not part of the base network for the previous year. New links and nodes should be added as appropriate.

LRS Submittal Option 2; LRSEDIT Files Plus Maps of New Links and Nodes

Complete LRSEDIT Files must be provided annually. Maps illustrating new links and nodes also must be provided. These maps should have a locational accuracy of at least that associated with 1:100,000 scale maps and must be adequate to support digitizing. Sufficient existing node and link detail must be included on the map(s) to enable FHWA to locate the new links and nodes.

LRS Submittal Option 3; State GIS Files

Complete GIS files must be provided annually; flags and narrative information must be provided as necessary to indicate data that has been added, deleted, or changed. FHWA should be contacted to discuss a State's plans for updating GIS submissions to ensure that FHWA receives appropriate data.