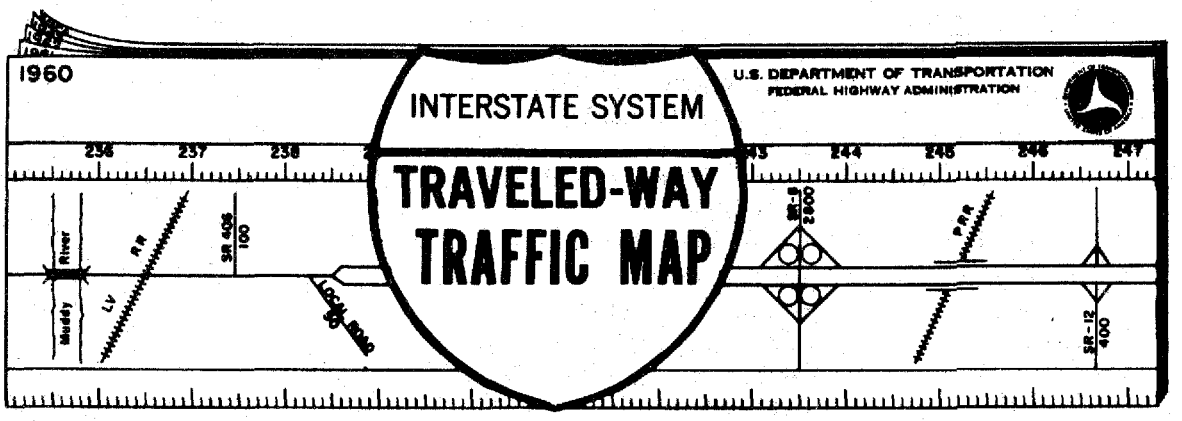

INSTRUCTIONS FOR ANNUAL UPDATING

Traffic flow maps of the Interstate traveled-way are prepared cooperatively with the State highway departments and published by the Federal Highway Administration. These traffic maps indicate average daily traffic on rural portions of the Interstate System, and are updated annually to reflect conditions as of December 31.

Each year the States will receive a route log showing data from the previous year's traffic map for use in updating. Although only rural sections are shown on the map, the route log, in the form of a computer listing, includes all rural and urban sections so that total travel can be estimated and published when desired. If the listing is not received from Washington by December 15, the Program Management Division should be contacted and additional copies will be forwarded.

The States, in cooperation with the Federal Highway Administration field offices, should make a thorough annual review, revision, and update of the route log in order to provide correct current traffic data. The route logs sent to the States show the control sections and average daily traffic used in developing the previous year's Interstate traffic map. Changes in traffic volumes will ordinarily occur on all sections so that all traffic figures (ADT) will require revisions. During the year, changes in location or status arising from construction and urban boundary changes will occur, making additional corrections necessary. The original copy of the route log, revised in accordance with these instructions, should be forwarded to the Program Management Division, Office of Highway Planning, Federal Highway Administration, Washington, D.C. 20590, by the third Monday in February.

The Interstate System traveled-way traffic route log format is as follows:

Column number	Item
1-2	Card number (1.4)
3-4	State code number
5	Status
6-7	Year of traffic data indicated by last two digits
8-11	Interstate route number
12-15	Section number
16-18	Section length
19	Rural or urban code
20-21	Number of traffic lanes
22	Access control code
23-28	ADT (for the year shown in columns 6-7)
29-37	Average daily vehicle miles
38-44	Corresponding current cost estimate section and segment number
45-78	Description of the beginning terminal of each section
79-80	Year of change to current status as coded in column 5, indicated by last two digits

General Instructions

In order that status of improvement as well as traffic volumes may be up to date for the revised traffic flow map, all sections of completed Interstate opened to traffic on or before December 31 of the current year should be included. This mileage should conform with the mileage shown in the "Interstate System Status Report," PR-511, for that date. In cases where there are short noncontinuous completed sections, the mileages of completed Interstate sections opened to traffic on or before December 31 shown for the traffic map may be slightly less than those shown on the Interstate System status report for that date, they should never exceed them. The traffic data will be estimated to show actual traffic served by the traveled-way of the Interstate System during the current year and will require the revising of all traffic figures.

Where the status or traveled-way location has changed during the current year, the revised route log sections for such locations should be prepared on a standard 80-column code sheet. Status changes may either increase or decrease the total number of sections on a route. For the traffic map, each route should be continuous throughout its entire length. Where sections parallel to the existing traveled-way have been opened during the year, connecting routes between the completed Interstate and remaining traveled-way should be included. Entries should be shown for all items except daily vehicle miles (columns 29-37). Daily vehicle miles will be calculated by the computer and need not be entered unless the State wishes to do so for its own purposes.

Where status or location changes have not occurred, year of the traffic data (columns 6-7) and ADT (columns 23-28) should be updated on the listings by entering the current figures directly above those which are shown on the listing. All section numbers (columns 12-15) that follow any status change which revises the route length should be revised in a like manner to provide continuous consecutive section numbering with no equations. All other items should be checked for correctness and corrected if found to be in error. See example on page 4-I-A-10.

The corresponding current cost estimate section and segment number (columns 38-44) should be inserted where appropriate if time allows.

Where two or more routes coincide, section lengths (columns 16-18) and ADT (columns 23-28) should ordinarily be shown for the route carried in the current cost estimate. Zeros should be entered in these fields for all other coinciding routes. In those cases where section length (columns 16-18) and ADT (columns 23-28) are shown as zero, a note should be entered to show the route and section under which this coincident mileage is carried. A notation in the description field (columns 45-78) is preferred. An example of this type notation might be, "For ADT, see I-75 21.5," which indicates that this section is coincident with section 21.5 for I-75 and that the traffic and section length is carried with I-75. If this type of note is not convenient to the State, any other form which is convenient and which will be clear to people with little familiarity with the listings may be used.

The rural-urban designation (column 19) should be carefully checked for all sections and corrected where necessary. New sections opened during the year and sections where municipal or Federal-aid urban area boundaries have been changed should be checked thoroughly.

Detailed instructions for determining and coding each field are listed below.

Detailed Instructions

Card number (columns 1-2): The card number will be coded 1.4 in all cases.

* State code number (columns 3-4): The State code number on the route log listing should agree with the codes given on page 4-I-A-11. These codes are standardized under the Federal Information Processing System (FIPS) for States and outlying areas of the United States. The States are coded in alphabetical order from 01 through 56 with the provision that numbers 03, 07, 14, 43, and 52 are reserved for possible future addition of outlying areas.

Status of improvement (column 5): The status of improvement should always be shown as of December 31 of the current year. The four status groups are coded as follows:

Status groups	Code
Completed to full Interstate standards	1
Adequate for present traffic	2
Toll roads incorporated into the Interstate System	5
Other	0

It should be noted that while the code for toll roads has been changed for the Interstate System status report, PR-511, by PPM 10-6, of June 30, 1966, it has not changed for the Interstate traveled-way study and remains as code 5.

Where the status of improvement on December 31 of the current year for which the traffic is to be shown has changed or will change for any portion of the route, all sections affected should be crossed out on the route log listing and new, completely revised entries for all sections necessary for continuous sequence should be prepared on a standard 80-column code sheet. Such status changes may either increase or decrease the total number of sections or the total length of the route on which they occur.

Year of traffic data (columns 6-7): The year of traffic data shown should always be the last two digits of the current year. Since the listings for the previous year will normally be submitted to the States for revising and updating, this item should in all cases be changed to show the current year, for which the ADT is estimated, when the revised ADT is entered.

Interstate route number (columns 8-11): Code this item as illustrated below:

Route	Code
Route I-1	0010
Route I-35E	0353 (N=1, S=2, E=3, W=4)
Route I-685	6850

Where two or more routes overlap, a 1.4 card is needed for each route.

Section number (columns 12-15): The section number will be the distance from the beginning point of the route in the State to the beginning point of the section. The length should be measured along the traffic lanes in the direction that the 1965 Cost Estimate sections progressed and should generally be west to east for even numbered routes, and south to north for odd numbered routes. The section number will always be a four-digit number, expressing the mile point at the beginning of the section to the nearest one-tenth of a mile and having all leading zeros for all mile points less than 100.0 miles from the beginning of the route in the State. For example, the section number of a section beginning 9.3 miles from the starting point of a route would be coded 0093.

Section breaks will be determined by:

1. Major intersections or interchanges--intersections with the traveled-way of other Interstate routes, and intersections where a major change in traffic occurs.

2. Changes in status of improvement.

3. Changes in control of access.

4. Changes in the rural-urban-municipal designation as coded in column 19.

5. Changes in the number of through traffic lanes. It will not be necessary to break sections for additional lanes in an interchange area, acceleration and deceleration lanes, weaving lanes, etc., or for extremely short sections, unless these fine breaks reflect the most restrictive condition in the section or desired by the State for its own use.

6. Section length--maximum 99.9 miles, minimum 0.1 mile.

7. Change in year of status of improvement except for extremely short sections.

It is desirable to have as few sections as possible consistent with reasonable reporting of variations in traffic volume and convenience to the State in correlating with other Interstate System Traveled-way Study data. Except in large urban areas, or where criteria 1, 2, 3, 5 or 6 apply, the desired section would be from urban limit to urban limit. Spur routes should be reported as one section unless section breaks are occasioned by the criteria.

For the revised traffic route log, a 1.4 card will be prepared for each section in the Washington office. For those States participating in the traveled-way study, sections for the 1.4 card may be several consecutive 1.2 card sections. The 1.4 card section breaks should coincide with the 1.2 card section breaks. If more convenient for the State, 1.2 card section breaks may be used for all 1.4 card section termini.

Where status has changed from the previous year, new sections may be necessary. Where section breaks no longer meet the above criteria, they may be deleted and sections combined. While it is convenient to have as few sections as possible, the State may add sections where needed for its own use.

Route section numbering should be continuous throughout each route in all cases. Where no status changes occur for a section, the section numbers should be checked and revised as needed to reflect any changes in route length of preceding sections resulting from status changes or corrections on such sections, thus eliminating the use of equations.

Where two routes coincide, section numbering should be carried throughout on each route independently of the other route.

Section length (columns 16-18): The section lengths will be shown to the nearest one-tenth of a mile. The section length will always be a three-digit number with leading zeros for all lengths less than 10.0 miles. The maximum section length is 99.9 miles and the minimum is 00.1. In all cases, the section number should be added to the section length and the sum should agree with the following section number to insure continuity of continuous section numbering. It should be noted that where two or more routes coincide, the actual section length should be used for checking as the length coded on the log will be zero for all but one of the coinciding routes.

Rural or urban designation (column 19): Code the rural-urban designations according to the following classifications:

Designation	Code
Entirely rural, not incorporated and not FA urban area	1
Incorporated place but not part of an FA urban area	2
Unincorporated area within an FA urban area	3
Incorporated place included in FA urban area	4

Where the entire area of a State is incorporated, the criteria listed under "Municipality" on pages iv and v of the "Instruction Manual for the Compilation and Reporting of Highway Mileage," revised May 1964, Highway Planning Program Manual, Volume 20, Appendix 22, should be referred to for determining whether the rural-urban code should be 1 and 2. All States should have some sections which come under rural-urban code 1.

Number of traffic lanes (columns 20-21): The number of traffic lanes on the through roadway for both directions of travel should be coded without regard to extra lanes through interchange areas or short sections less than about two miles in length having a greater or lesser number of lanes. When the number of lanes changes several times in a relatively short distance, the entire distance may be considered as one section unless broken by other control items. In such cases, the number of lanes should be coded for the fewest number of lanes to reflect the most restrictive condition in the section.

Access control (column 22): Sections having control of access will be coded "1." Sections having no control of access will be coded "0." Sections having partial control of access will be coded "2."

ADT (columns 23-28): The annual average daily traffic (ADT) shown on the listings sent to the division office from the Washington office will be that ADT used in preparing the previous traffic map. In all cases, the ADT for the current year should be estimated from available traffic data.

The current year's ADT should be entered in columns 23-28. The ADT should be shown to the nearest vehicle to reduce the cumulative effect of rounding and will be shown on the published map to the nearest 100 vehicles. While this procedure is preferred, ADT's may be shown to the nearest 10 or 100 vehicles if the State data to units are not readily available. Six columns are provided for this field so that all ADT's may be coded to the units digit, where data are reported to the nearest 10 or 100 vehicles, zeros must be coded in the units or tens and units positions, respectively.

Where the old traveled route was used for part of the year before a final section was opened to traffic, a weighted average (equivalent) ADT should be calculated for the new section. For example, if on September 12, 1965, a 5.3 mile section of traveled-way carrying an average of 5,062 vehicles per day for the 8 months, 11 days was replaced by a 4.8 mile section of completed Interstate carrying an average of 4,123 vehicles per day for the remaining 3 months, 19 days, the equivalent ADT may be calculated as follows:

255/365 x 5,062 (8 months, 11 days average) x 5.3 = 18,743 average daily vehicle miles

111/365 x 4,123 (3 months, 19 days average) x 4.8 = 6,018 average daily vehicle miles

Total 24,761

24,761 ÷ 4.8 = 5,159 equivalent ADT

The ADT value thus obtained will be used in calculating vehicle miles as if the length of route section had been the same as the length of the new section for the entire year. This will yield the same annual vehicle miles value as the sum of the vehicle miles for the old and new sections with each being calculated for the portion of the year for which it served the traffic.

In the case of circumferential or spur routes for which there was no definable traveled-way prior to the opening of the completed section, the ADT should be an average value for the portion of the year the section was actually carrying traffic. The date the section was opened to traffic or the number of days it was in operation during the year should be noted on the log, so that the actual vehicle miles of travel on it during the current year can be calculated.

Where two Interstate routes have the same traveled-way, the section numbering for both routes should be continued throughout both routes but the traffic data in the area of coincidence should be shown on only the approved Interstate route. In the case of overlaps on traveled routes not on the completed Interstate, where this criteria cannot be applied, then the route having the lowest Interstate route number should be used

to prevent duplication of vehicle mile estimates. The affected portion of the other route should be coded to show the ADT as zero and a note added to indicate the route which carries the ADT.

Where current coverage counts are available for particular road sections, the current ADT should be estimated in the usual manner of expanding the coverage count by the group mean factor for the applicable pattern group. This procedure is described in "Guide for Traffic Volume Counting Manual," Volume 20, Appendix 26, Highway Planning Program Manual. This is based on the mean of the ratios of the ADT to the average weekday of the month for all ATR stations in the group. The coverage count is multiplied by the group mean factor for the same month to provide an estimate of ADT.

Where current coverage counts are not available, it may be desirable to obtain coverage counts, particularly for recently completed sections. Where this is not feasible, available coverage counts from previous years should be used.

In estimating current ADT from a previous year's coverage count, the previous year's ADT, computed from the coverage count, will be available. This previous year's ADT with a growth factor applied, which is the ratio of the current year's ADT to the previous year's ADT at the appropriate ATR station, may be used as an estimate of current ADT.

Daily vehicle miles traveled (columns 29-37): The DVM (columns 29-37) shown on the listings are computed by multiplying the ADT (columns 23-28) by the section length (columns 16-18) in the computer and are shown to the vehicle mile with the tenth truncated. This figure need not be calculated or revised by the State when reviewing and updating the listing unless desired by it for particular uses.

Corresponding current cost estimate section and segment numbers (columns 38-44): The cost estimate section and segment numbers are the letter and number combinations used to identify the beginning points of the sections reported in the latest Interstate Cost Estimate. Where cost estimate section termini correspond or are within 0.1 mile of the beginning or end of portions of the traffic log reported in status 1 or 5, they should be included. In all other cases, this field should be blank. These corresponding cost estimate section and segment numbers are needed for comparing traffic log data with that from the estimate. While it would be very desirable to have the State enter these where they are not presently shown, particularly where status changes have occurred, the early return of the corrected and updated listings should not be delayed for this item.

Columns 38 to 44 are used for the Interstate Cost Estimate section and segment numbers. Column 38 contains the letter, columns 39 and 40 contain the number preceding the first decimal. If this number is less than 10, the number should be entered as 01, 02, 03, etc. Column 41 will contain the number after the first decimal. If this number is greater than 10, a

letter designation must be used: A for 10, B for 11, C for 12, etc. Column 42 contains the number following the second decimal. The same procedure is to be used as in column 41 if the number is larger than 10. The segment number goes in columns 43 and 44. Segment numbers less than 10 are entered as 01, 02, etc.

Description of section beginning point (columns 45-78): The section termini may be identified by highway junction, urban limit, corporate limit, State line, county line, river crossing, railroad crossing, or by distance and direction to any of these which can be identified on State tourist maps.

Where status changes have occurred and new sections are entered on code sheets, the termini descriptions should be coded in columns 45-78 of the code sheet. Where no changes occur, the termini descriptions should be reviewed and revised only where errors are discovered.

Year of change to current status (columns 79-80): The year of change to current status should always be the last two digits of the year in which the road section reached the status shown in column 5. Where the status in column 5 is zero, columns 79-80 should be zero or blank. A new section should be coded whenever there is a change in the year of status change, except that when the change applies to sections less than 1.0 mile in length the section need not be broken unless the State wishes to do so for its own use.

EXAMPLE ROUTE LOG

CO NO	ST	STATUS	YR	RTE	SEC. NO.	SEC. LEN.	R U	LANES	ACC. CTL.	ADT	DVM	COST ESTIMATE		
~~1.4~~	~~29~~	~~2~~	~~69~~	~~0780~~	~~004.7~~	~~01.6~~	~~1~~	~~04~~	~~1~~	~~25,470~~	~~40,752~~	~~A 01 4 0 00~~	~~JCT. US 22~~	~~59~~
1.4	29	1/~~2~~	70/~~69~~	0780	006.4/~~006.3~~	01.4/~~01.5~~	2/~~1~~	06/~~04~~	1	23,670/~~23,580~~	35,370		POHATCONG CREEK	68/~~59~~
1.4	29	1/~~2~~	70/~~69~~	0780	007.8	00.3	2	06/~~04~~	1	23,670/~~23,580~~	7,074		WARREN-HUNTERDON CO. LINE	68/~~62~~
~~1.4~~	~~29~~	~~2~~	~~69~~	~~0780~~	~~008.1~~	~~00.3~~	~~2~~	~~06~~	~~1~~	~~23,580~~	~~7,074~~		~~US 22 INTERCHANGE~~	~~62~~
1.4	29	1	69	0780	008.4	00.2	1	06	1	23,580	4,716		BLOOMSBURY C. L.	62
1.4	29				008.6	00.4	1	06					0.5 MI. E. OF US-22 INT.	68
1.4	29				009.0	00.2		06					0.4 MI. W. OF LEHIGH VALLEY R.R.	62
1.4	29				009.2	01.6	1	06					0.2 MI. W. OF LEHIGH VALLEY RR	68
1.4	29	1	69	0780	010.8	00.5	1	06	1	23,580	11,790		0.3 MI. E. OF TUNNEL HILL RD.	62
~~1.4~~	~~29~~	~~1~~	~~69~~	~~0780~~	~~011.3~~	~~01.2~~	~~1~~	~~06~~	~~1~~	~~23,580~~	~~28,296~~		~~0.8 MI. E. OF TUNNEL HILL RD~~	~~68~~
1.4	29	1	70/~~69~~	0780	012.5	01.8/~~00.7~~	2/~~1~~	06	1	24,600/~~23,580~~	16,506	A032101	PATTENBURG RD. INTERCHANGE	68
~~1.4~~	~~29~~	~~1~~	~~69~~	~~0780~~	~~013.2~~	~~01.1~~	~~1~~	~~06~~	~~1~~	~~23,580~~	~~25,938~~		~~HULHOCKAWAY CREEK~~	~~68~~
1.4	29	1	70/~~69~~	0780	014.3	02.7/~~02.2~~	2/~~1~~	06	1	24,600/~~23,580~~	51,876		JCT. COUNTY RD. 26	68
~~1.4~~	~~29~~	~~1~~	~~69~~	~~0780~~	~~016.5~~	~~01.5~~	~~2~~	~~06~~	~~1~~	~~23,580~~	~~35,370~~	~~A 05 0 0 00~~	~~JCT. US 22 CLINTON C.L.~~	~~60~~
~~1.4~~	~~29~~	~~1~~	~~69~~	~~0780~~	~~018.0~~	~~00.5~~	~~1~~	~~06~~	~~1~~	~~23,580~~	~~11,790~~		~~TOWN OF CLINTON & CLINTON CORP LIN~~	~~68~~
1.4	29	1	70/~~69~~	0780	018.5	00.9	2/~~1~~	06	1	16,850/~~23,580~~	21,222	A051001	INTERCHANGE SR 31 / ~~JCT SR 31~~	68
1.4	29	1	70/~~69~~	0780	019.4	00.3	2/~~1~~	06	1	16,850/~~15,050~~	4,545		INTERCHANGE US 22 EB / ~~JCT. US 22 EB~~	69

Revised to show current year.

Revised to show current ADT.

These figures calculated by the computer and need not be revised by the States.*

Areas where changes are coded on code sheet.

DATA CODE SHEET

CARD NO.	STATE	STATUS	YEAR	F A I ROUTE	SECTION NO.	SECTION LENGTH	RURAL - URBAN	NO. OF LANES	CONTROL OF ACCESS	A. D. T.	D. V. M.	CURRENT COST ESTIMATE SECTION	DESCRIPTION OF SECTION BEGINNING PT.	DATE OF STATUS 1 OR 2
1	2	3	4	5	6–11	12–15	16	17	18	19–22	23–26	27–28	29–44	45–80
1	4	2	9	1	700780	0056	0	8	2	0061	0236	70	0.6 MI. E. OF JCT. US 22	68
1	4	2	9	1	700780	0081	0	2	2	0061	0246	00	BLOOMSBURY C. L.	68
1	4	2	9	1	700780	0083	0	4	2	0061	0246	00	A031001 INT 173 INTERCHANGE	68
1	4	2	9	1	700780	0017	0	1	5	4061	0246	00	PITTSTOWN RD. INT.	68

*Route totals for section length, ADT, and DVM are shown on the route log but need not be revised by the States.

Table of FIPS Standard Codes for States and Outlying Areas of the United States

NAME	CODE	NAME	CODE
Alabama	01	Nevada	32
Alaska	02	New Hampshire	33
Arizona	04	New Jersey	34
Arkansas	05	New Mexico	35
California	06	New York	36
Colorado	08	North Carolina	37
Connecticut	09	North Dakota	38
Delaware	10	Ohio	39
District of Columbia	11	Oklahoma	40
Florida	12	Oregon	41
Georgia	13	Pennsylvania	42
Hawaii	15	Rhode Island	44
Idaho	16	South Carolina	45
Illinois	17	South Dakota	46
Indiana	18	Tennessee	47
Iowa	19	Texas	48
Kansas	20	Utah	49
Kentucky	21	Vermont	50
Louisiana	22	Virginia	51
Maine	23	Washington	53
Maryland	24	West Virginia	54
Massachusetts	25	Wisconsin	55
Michigan	26	Wyoming	56
Minnesota	27		
Mississippi	28	American Samoa	60
Missouri	29	Guam	66
Montana	30	Puerto Rico	72
Nebraska	31	Virgin Islands	78