

**Illinois Highway Information System
Roadway Information & Procedure Manual**

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Introduction

The IRIS manual can be downloaded from the IDOT web site <http://www.idot.illinois.gov/index> under the “Transportation System”, “Network Overview”, “Highway System” selection. The manual is also available as an IDOT electronic pdf document found within the Inside IDOT Intranet.

The purpose of this manual is two-fold. The first is to define what, why and how roadway information is collected. Then, once information is collected, to explain when and how it is entered into the Illinois Roadway Information System (IRIS).

The following overview explains the scope of IRIS activities and defines some general guidelines. A detailed explanation of each data element is provided later.

What is Collected

Roadway information is collected for all public highways as defined in Illinois Compiled Statutes (605 ILCS 5/2-202). A ‘public highway’ is defined as the entire width, between right-of-way lines, of a highway that is open for public travel. This includes existing and proposed roads as well as dedicated right-of-way. However, this does not include roadways or driveways provided by a business or landowner for access to their property.

Previously unreported public highways must be 0.04 mile or longer to be added to IRIS. Existing IRIS alignments are revised for changes affecting 0.01 mile or more.

Why is Roadway Information Collected

IRIS roadway information is collected for four primary reasons - to qualify for funding, prioritize highway rehabilitation needs, publish maps, and proportion Motor Fuel Tax (MFT) to Township road districts. Below is a list of Federal Regulations and Illinois Statutes regulating the collection of roadway information.

23 U.S.C. 402(c): “Funds authorized to be appropriated to carry out this section shall be used to aid the States to conduct the highway safety programs ...”

23 CFR 460.3 (a): “General requirements. 23 U.S.C. 402(c) provides that funds authorized to carry out section 402 shall be apportioned according to a formula based on population and public road mileage of each State.”

23 CFR 420.105(b): “The State DOTs must provide data that support the FHWA’s responsibilities to the Congress and to the public. These data include, but are not limited to, information required for: preparing proposed legislation and reports to the Congress; evaluating the extent, performance, condition, and use of the Nation’s transportation systems; ...”

605 ILCS 5/4-101.6: “To compile statistics relating to highways throughout the State and collect such information in regard thereto as it shall deem expedient.”

605 ILCS 5/4-101.11: “To make investigations to determine reasonably anticipated future need for federal aid highways and State highways.”

605 ILCS 5/4-101.13: “To publish maps in convenient forms showing State and other highways for use by the public ...”

605 ILCS 5/4-303: “Investigations made by the Department to determine the reasonably anticipated future need for federal aid highways and State highways may include, but shall not be limited to, the making of traffic surveys, the study of transportation facilities, research

concerning the development of the several areas within this State and contiguous territory as affected by growth and changes in population and economic activity and the collection and review of data relating to all factors affecting the judicious planning of construction, improvement and maintenance of highways.”

605 ILCS 5/6-901: “The Department of Transportation shall apportion among the several counties of this State for the use of road districts the amounts appropriated under this Section. The amount apportioned to a county shall be in the proportion which the total mileage of township or district roads in the county bears to the total mileage of all township and district roads in the State.”

Open and Passable

A road must be both “open” and “passable” to qualify for funding.

To be considered “open” for public travel, the road should be free of obstructions (gates, chains, fences, fallen trees, etc.) that would prevent a motorist from driving the full length of the road. The road must be free of signs indicating no trespassing, road closed, or other markers, which indicate public travel is prohibited. Roadway information should be collected for roads leading up to a closed bridge or culvert until the approaches are no longer open or passable. The public vehicular use of the highway must not be prohibited, for reasons other than construction, for more than 90 days in a calendar year to be considered open.

Generally, the test for “passable” is whether the road can be safely traversed in a four-wheel drive vehicle in dry conditions without leaving the roadway. In order to determine if a road satisfies this test, a four-wheel drive vehicle is required.

In addition, the following criteria must be met to be considered “passable”:

- The roadway shall be free of excessive ruts or potholes. Rutting in excess of 9 inches in depth should not exist on the majority of the roadway, unless a vehicle can straddle the ruts and traverse the road with relative ease at a low rate of speed.
- For dirt roads, delineation of the roadway must be readily identifiable, either by wheel paths or cross section recognition.
- Vegetation and other obstructions lateral to the roadway should be adequately cleared to allow a standard size four-wheel drive to pass without rubbing or scratching the vehicle.
- Adequate drainage must be available to prevent ponding on the roadway, or erosion of the roadway, except in instances of seasonal or prolonged flooding.

How is Roadway Information Collected

The roadway information collection activity varies depending on the highway being inventoried. Information for an interstate highway is provided entirely by IDOT agencies. However, information for a local road can come from one or more non-IDOT agencies as well as IDOT, for example county, township or municipal.

The district Bureau of Program Development is responsible for coordinating collection activities with agencies in their district. This involves maintaining continual contact with IDOT and non-IDOT agencies to insure that IRIS information is complete, accurate and up-to-date. The following procedures are provided as guidelines in coordinating these activities. These procedures are suggestions that can be altered to meet the needs of each district.

For highways outside of local agency responsibility, contact with other agencies and IDOT bureaus, both district and central, can identify areas of change. Because of the volume of

information needed and the miles involved, field review must be kept to a minimum. This can be accomplished through several methods.

First, when construction plans are available, most information can be extracted from them. After reviewing the plans, a quick drive over the road can verify that there is no significant deviation from the plan information. In-field measurements are not necessary unless a problem is suspected.

Second, where plans are not available, once an initial inventory is completed, drive-through reviews can verify the accuracy of the information. Again, additional in-field measurements are not required unless a problem is suspected.

Four wheel drive vehicles are required to traverse the 3,000 miles of dirt roads throughout the State of Illinois. Other equipment necessary to complete field review includes a distance measuring device, laptop computer as well as a GPS receiver.

For highways that are the responsibility of local agencies, coordination with the county engineer and township or road district commissioner is sufficient to identify most county and township highway changes. Copies of township or road district maintenance plats, signed by both the county engineer and township or road district commissioner for that township or road district, should be retained in the district office.

When a township or road district road is annexed into a municipality, that section of road must be changed to a municipal street. Also, when a municipality annexes property immediately adjacent to a township or road district road, that section of road must be changed to a municipal street.

In addition, the existence, length and other readily apparent characteristics of local roads "open to public travel" should be verified periodically. A five-year cycle for complete reinventory of roads within a county is desirable. This period can vary depending on area growth. However, each county needs to be checked at least once every ten years.

Reinventory of municipal street systems is not necessary. Annual contact with municipal officials can identify those areas that need to be reviewed because of incorporation or construction. This contact should include obtaining copies of corporate limit maps and ordinances of incorporation or disconnection.

When are IHIS Backup Files Created

Annual copies of all IHIS files are provided for historic reference. These files are prepared at the beginning of each processing year and retained indefinitely.

Additionally, all IHIS information is copied to backup files on a regular basis. These files are used to reload IHIS if a massive computer system failure occurs.

How Roadway Attributes are Organized

Inventory data is collected and stored in the "With" direction of travel. Data collected specifically for the "Against" direction of travel is stored in the identical manner, utilizing the "With" stationing (Measures). Information regarding "With" stationing can be found in Item 7 of this manual.

USING THE IRIS MANUAL

1. ITEM NAME - The name assigned to this data element.
2. ITEM NO. - The number assigned to this data element.
3. PAGE - The page number and total number of pages for this data element.
4. ENTERED BY - The agency assigned responsibility for reporting this data element. The following currently have assigned responsibilities:
 - * Central Bureau of Statewide Program Planning
 - * Central Bureau of Urban Program Planning
 - * District Bureau of Operations
 - * District Bureau of Program Development
 - * Office of Planning and Programming
5. STATE - The reporting requirement for state jurisdiction or maintained roads.
 - * Yes - Enter available information
 - * Opt - Enter information at your discretion
 - * NA - Does not apply
6. NON-STATE - The reporting requirement for non-state jurisdiction or maintained roads.
 - * Yes - Enter available information
 - * Opt - Enter information at your discretion
 - * NA - Does not apply
7. HPMS - The reporting requirement for HPMS.
 - * Yes - Enter available information
 - * Opt - Enter information at your discretion
 - * NA - Does not apply
8. MUNI - The reporting requirement for Municipal Street System roads.
 - * Yes - Enter available information
 - * Opt - Enter information at your discretion
 - * NA - Does not apply
9. EFFECTIVE DATE - The date on which this item, as revised, became effective.
10. UPDATE - The name for the screen used to record changes for this data element.
11. GIS NAME - The Geographical Information System (GIS) field name used for this data element.
12. DATABASE NAME - The computer extract field name assigned to this data element.
13. DESCRIPTION AND PURPOSE OF ITEM - The data element definition, purpose and collection location or process.
14. CODE AND SCREEN ENTRY INSTRUCTIONS - The data element format, entry instructions, codes, examples and illustrations.

**ILLINOIS HIGHWAY INFORMATION SYSTEM
ROADWAY INFORMATION AND PROCEDURE MANUAL**

ITEM NAME (1)					ITEM NO. (2)	PAGE (3)
ENTERED BY	STATE	NON-STATE	HPMS	MUNI	EFFECTIVE DATE	
(4)	(5)	(6)	(7)	(8)	(9)	
UPDATE	GIS NAME				DATABASE NAME	
(10)	(11)				(12)	

DESCRIPTION AND PURPOSE OF ITEM

(13)

CODE AND SCREEN ENTRY INSTRUCTIONS

(14)

Data Item List by Item Name

<u>Item Number</u>	<u>Item Name</u>	<u>Update Screen</u>
33	1 or 2 Way Operation	Operations
17	Access Control	Operations
76	Annual Average Daily HCV/Multi Unit Volume Year	Traffic Count
75	Annual Average Daily Heavy Commercial Volume	Traffic Count
75A	Annual Average Daily Multiple Unit Volume	Traffic Count
75B	Annual Average Daily Single Unit Volume	Traffic Count
35	Annual Average Daily Traffic	Traffic Count
34	Annual Average Daily Traffic Year	Traffic Count
14	Built By	Geographical
46	Condition Rating Date	CRS
42	Condition Rating Survey	CRS
58	Congressional District	Geographical
94I	Construction As Built Plan File Path	Construction History
94C	Construction Contract Number	Construction History
94E	Construction Direction of Traffic	Construction History
94D	Construction Microfilm Number	Construction History
94H	Construction Milling Depth	Construction History
94F	Construction Resurfacing Thickness	Construction History
94A	Construction Route	Construction History
94B	Construction Section	Construction History
70A	Construction Type	Construction History
70	Construction Year	Construction History
6	County	Geographical
9	County Adjacent	Geographical
47	County Highway Number	Road Name
6A	District	-
29	District Maintenance	-
163A	Faulting Height	CRS
57	Functional Classification (Illinois 5-Year)	Operations
25	HPMS Section	-
141A	International Roughness Index	CRS
61B	Intersection Type	References
174	Inventory Key Route Appurtenance Number	-
4	Inventory Key Route Appurtenance Type	-
0	Inventory Key Route Identification	-
2	Inventory Key Route Number	-
4A	Inventory Key Route Segment	-
3	Inventory Key Route Suffix	-
1	Inventory Key Route Type	-
12	Jurisdictional Responsibility	Geographical
16	Lanes Number	Lanes
16C	Lanes Special Number	Lanes
16B	Lanes Special Type	Lanes
16D	Lanes Special Width	Lanes
16A	Lanes Width	Lanes
7A	Length	-
13	Maintenance Responsibility	Geographical
128	Maintenance Section	Operations
39	Marked Route	-
54	Median Type	Shoulders
23	Median Width	Shoulders
8M	Metropolitan Planning Organization (MPO)	Geographical

Data Item List by Item Name

<u>Item Number</u>	<u>Item Name</u>	<u>Update Screen</u>
5	Municipality.....	Geographical
5B	Municipality Adjacent.....	Geographical
140	National Highway System (NHS)	Operations
120	National Railroad Crossing Number (RRx)	References
164	Nonattainment Area	Geographical
95A	Original Pavement Design.....	Construction History
95C	Original Pavement Reinforcement	Construction History
95D	Original Pavement Subbase Thickness	Construction History
95B	Original Pavement Width.....	Construction History
67A	Parking Restrictions Left	Shoulders
67B	Parking Restrictions Right.....	Shoulders
74A	Pavement Distress	CRS
6B	Planning Agency	Geographical
65K	Reference Key Route	-
65M	Reference Marked Route	-
65	Reference Point.....	References
65-O	Reference Point Orientation	References
65-T	Reference Point Type.....	References
65S	Reference Street Name.....	-
6R	Region.....	-
59	Representative District	Geographical
28	Right-of-Way Available.....	ROW
27	Right-of-Way Existing.....	ROW
7	Route Station.....	-
142A	Rut Depth	CRS
22C	Shoulder Inside Type 1	Shoulders
22D	Shoulder Inside Type 2	Shoulders
21C	Shoulder Inside Width 1	Shoulders
21D	Shoulder Inside Width 2	Shoulders
22A	Shoulder Outside Type 1.....	Shoulders
22B	Shoulder Outside Type 2.....	Shoulders
21A	Shoulder Outside Width 1	Shoulders
21B	Shoulder Outside Width 2	Shoulders
15	Special Systems.....	Operations
87	Speed Zone Speed Limit	Operations
61	Street/Road Name.....	Road Name
96	Structure Number.....	-
18	Surface Type	Lanes
20	Surface Width.....	Lanes
50	Toll Facility Type	Operations
10	Township or Road District	Geographical
11	Township or Road District Adjacent	Geographical
61A	Traffic Control.....	References
77	Truck Route Designation.....	Operations
8	Urban Area	Operations

Operations and Geographical can be accessed by the “Operations” button

Lanes, Shoulders, and ROW can be accessed by the “Physical Attributes” button

Road Name and Routes can be accessed by the “Route Identification” button

Data Item List by Item Number

<u>Item Number</u>	<u>Item Name</u>	<u>Update Screen</u>
0	Inventory Key Route Identification.....	-
1	Inventory Key Route Type.....	-
2	Inventory Key Route Number.....	-
3	Inventory Key Route Suffix.....	-
4	Inventory Key Route Appurtenance Type.....	-
4A	Inventory Key Route Segment.....	-
5	Municipality.....	Geographical
5B	Municipality Adjacent.....	Geographical
6	County.....	Geographical
6A	District.....	-
6B	Planning Agency.....	Geographical
6R	Region.....	-
7	Route Station.....	-
7A	Length.....	-
8	Urban Area.....	Geographical
8M	Metropolitan Planning Organization (MPO).....	Geographical
9	County Adjacent.....	Geographical
10	Township or Road District.....	Geographical
11	Township or Road District Adjacent.....	Geographical
12	Jurisdictional Responsibility.....	Geographical
13	Maintenance Responsibility.....	Geographical
14	Built By.....	Geographical
15	Special Systems.....	Operations
16	Lanes Number.....	Lanes
16A	Lanes Width.....	Lanes
16B	Lanes Special Type.....	Lanes
16C	Lanes Special Number.....	Lanes
16D	Lanes Special Width.....	Lanes
17	Access Control.....	Operations
18	Surface Type.....	Shoulders
20	Surface Width.....	Shoulders
21A	Shoulder Outside Width 1.....	Shoulders
21B	Shoulder Outside Width 2.....	Shoulders
21C	Shoulder Inside Width 1.....	Shoulders
21D	Shoulder Inside Width 2.....	Shoulders
22A	Shoulder Outside Type 1.....	Shoulders
22B	Shoulder Outside Type 2.....	Shoulders
22C	Shoulder Inside Type 1.....	Shoulders
22D	Shoulder Inside Type 2.....	Shoulders
23	Median Width.....	Shoulders
25	HPMS Section.....	-
27	Right-of-Way Existing.....	ROW
28	Right-of-Way Available.....	ROW
29	District Maintenance.....	-
33	1 or 2 Way Operation.....	Operations
34	Annual Average Daily Traffic Year.....	Traffic
35	Annual Average Daily Traffic.....	Traffic
39	Marked Route.....	-
42	Condition Rating Survey.....	CRS
46	Condition Rating Date.....	CRS
47	County Highway Number.....	Road Name
50	Toll Facility Type.....	Operations

Data Item List by Item Number

<u>Item Number</u>	<u>Item Name</u>	<u>Update Screen</u>
54	Median Type.....	Lanes
57	Functional Classification (Illinois 5-Year).....	Operations
58	Congressional District	Geographical
59	Representative District	Geographical
61	Street/Road Name.....	Road Name
61A	Traffic Control.....	References
61B	Intersection Type.....	References
65	Reference Point.....	References
65-O	Reference Point Orientation	References
65-T	Reference Point Type.....	References
65K	Reference Key Route	-
65M	Reference Marked Route	-
65S	Reference Street Name.....	-
67A	Parking Restrictions Left	Shoulders
67B	Parking Restrictions Right	Shoulders
70	Construction Year.....	Construction History
70A	Construction Type	Construction History
74A	Pavement Distress	CRS
75	Annual Average Daily Heavy Commercial Volume	Traffic
75A	Annual Average Daily Multiple Unit Volume	Traffic
75B	Annual Average Daily Single Unit Volume	Traffic Count
76	Annual Average Daily HCV/Multi Unit Volume Year.....	Traffic
77	Truck Route Designation.....	Operations
87	Speed Zone Speed Limit	Operations
94A	Construction Route.....	Construction History
94B	Construction Section	Construction History
94C	Construction Contract Number	Construction History
94D	Construction Microfilm Number	Construction History
94E	Construction Direction of Traffic.....	Construction History
94F	Construction Resurfacing Thickness.....	Construction History
94H	Construction Milling Depth	Construction History
94I	Construction As Built Plan File Path.....	Construction History
95A	Original Pavement Design.....	Construction History
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95D	Original Pavement Subbase Thickness.....	Construction History
96	Structure Number	-
120	National Railroad Crossing Number.....	References
128	Maintenance Section	Road Name
140	National Highway System	Operations
141A	International Roughness Index.....	CRS
142A	Rut Depth	CRS
163A	Faulting Height	CRS
164	Nonattainment Area	Operations
174	Key Route Appurtenance Number	-

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