



Land Information Ontario

**NRVIS/OLIW Data Management Model For
MNR Sign Site (v.1)
Published Edition**

Issued: August 13, 2007

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Additional Information

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Refer to the *DMM Users-Guide to the Published Edition* for additional details about the context of information collected for a Data Management Model.

This document was generated using *DMM Edition Template Version: 2.3*

Published August, 2007
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Preface

For most of the Ontario Government's geospatial information holdings, successful data management is achieved through the process of documenting data standards. This document summarizes the basic data management requirements for specific Land Information Ontario (LIO) Data Class(es).

Several corporate applications are used by LIO to manage, disseminate, protect and make accessible where available, all of the geospatial holdings that reside within the Ontario Land Information Warehouse (OLIW). The major applications are:

- Data Standards Repository (DSR)
- Land Information Data Subscription System (LIDS)
- Land Information Publishing System (LIPS)
- Land Information Security Administration System (LISA)
- LIO Internet Mapping Framework (IMF - includes View, Web Mapping and Web Feature Services)
- Natural Resources Values Information System (NRVIS) Administration
- Ontario Land Information Directory (OLID)

Clients should consult the official OLID metadata record for any additional information about the Data Class not found in this document (www.lio.gov.on.ca). LIO also has a Support Team that can answer additional questions about a Data Class. This Support Team uses a **three-tiered support model** to assist clients, described below.

When a user/client has a question about the dataset, they will initially contact...

Tier	Service Provider	Phone	email
1	Information Access Helpline	(705) 755-1878	lio@ontario.ca

If the Information Access Helpline staff cannot provide assistance, the request will in turn be passed on to...

Tier	Service Provider	Phone	email
2	*NRVIS Support Helpline	<i>Provided by Tier-1</i>	<i>Provided by Tier-1</i>

If NRVIS Support staff cannot provide assistance, they will consult with the Information Owner (IO), and then get back to the client.

Tier	Service Provider	Phone	email
3	Dataset Information Owner	<i>Contacted/provided by Tier-1 or Tier-2</i>	<i>Contacted/provided by Tier-1 or Tier-2</i>

** Please note that Tier-2 support is intended for datasets that are maintained by the NRVIS Application. OLIW-only dataset enquiries will be fielded directly to the Information Owner (IO) if assistance cannot be provided by Tier-1 support staff.*

Data Analysis Projects are supported by staff with the Ontario Ministry of Natural Resources (OMNR), Geographic Information Branch (GIB), Information Management, Policy and Standards Coordination Section. (IMPSC)

Caveat: The information within this document is relevant to the date it was produced, and may become outdated over time. The Information Owner for this Data Class is responsible for updating the OLID metadata record for their information holdings. The reader is encouraged to review the corresponding OLID record to obtain up-to-date information for Data Classes. The reader can access the OLID Metadata record search engine, along with additional information about OLIW itself, through this internet web link www.lio.gov.on.ca.

Background and Context



The MNR Sign Site data class was first proposed by Hearst District, and vetted at a NE Region GIS Technical meeting late fall, in 2006. The majority of MNR Districts from the NE Region added their support, and expressed a business justification for creating this new NRVIS data class. The NW MNR Region and Districts also supported this initiative. Once the project was approved by GIB, a project working group was assembled with representation from both MNR Regions and their respective Districts. The team scoped out the business requirements, defined the model, and drafted an information management plan for the data class. The Southern MNR Region was not able to participate at the time, though it is hoped that the model is flexible enough to meet their business requirements.

This data class provides a spatial inventory, along with basic attributes for all signage erected/maintained and/or is of interest to the Ministry of Natural Resources within each District. Repeated Site visit/inspection details are also accommodated by the model.

The following sections in this document are considered technical. For a more hands-on description of what this data class contains and how it is intended to be used, we recommend that readers refer to the *NRVIS Data Class User Guide for MNR Sign Site* available through the NRVIS website (intranet) or via the Information Access helpline.

Current Status of Data Class

This section describes the current status of the Data Class/Project

MNR Sign Site (Version 1)

Current Status: Complete, Timeline: Jan. 2007 to July, 2007 (expected: August, 2007)

Target Databases: This is a NRVIS 3.3.2 and an OLIW 2007 Data Class

IMPSCS Analyst Team: *Lead Analysts are identified by bolded text.*

James Gratton, Data Analyst

Don McGorman, Data Analyst

Data Class Version History

A summary of all Data Class versions.

Version	Complexity	Version Description	NRVIS	Release	OLIW	Release	Start	Finish
1	Simple	New Data Class for 2007	X	3.3.2	X	2007	Jan. 2007	July, 2007

Contact Roles and Responsibilities

This section identifies the key players and their role association to this Data Class.

Information Owner: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northeast Science and Information Section (NESI)

Status: Established

The NE & NW regional science managers accept the shared role as information owner for the NRVIS MNR Signs concrete class under the terms documented in the Information Access Services sign off form for this data class.

CONTACTS AND ROLES:

GIS Officer

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northeast Region (NER), Chapleau District

Expertise: Chapleau District GSO

Roles: *including status and contribution*

Business Area Expert (Established)

Signs project working group member.

GIS Officer

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northeast Region (NER), Wawa District

Expertise: District GSO

Roles: *including status and contribution*

Business Area Expert (Established)

Signs project working group member.

GIS Officer

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northwest Region (NWR), Fort Frances District

Expertise: District GSO

Roles: *including status and contribution*

Business Area Expert (Established)

Signs project working group member.

GIS Support Officer

Organization: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northeast Science and Information Section (NESI)

Expertise: GIS support

Roles: *including status and contribution*

Main Contact (Established)

GIS Lead for NE Region for Signs project. Defining custodian framework discussions.

Metadata (OLID) (Established)

Created and signed-off official OLID metadata record (July, 2007)

NRVIS Administrator (Established)

Same protocol for NRVIS datasets edited at the OMNR District Level

Sensitivity Classification (Established)

Assigned sensitivity classification to the data class based on OMNR guidelines on behalf of the Information Owner (IO)

GIS Support Officer

Organization: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northwest Science and Information Section (NWSI)

Expertise: GIS Support

Roles: *including status and contribution*

General Contact (Default)

Tier-3 Support for NW Region

NRVIS Administrator (Established)

Same protocol for NRVIS datasets edited at the OMNR District Level

GIS Technician

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northeast Region (NER), Hearst District

Expertise: District GIS Technician

Roles: *including status and contribution*

Business Area Expert (Established)

Submitted original request to NRVIS Support for this data class. Active participant in MNR Sign Site project working group.

Information Management Coordinator (NESI)

Organization: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northeast Science and Information Section (NESI)

Expertise:

Roles: *including status and contribution*

Sponsor (Established)

Involved with defining Information Ownership Framework for this new data class.

Information Management Supervisor

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northwest Region (NWR), Sioux Lookout District

Expertise:

Roles: *including status and contribution*

Business Area Expert (Established)

Signs project working group member.

Information Officer

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), Northwest Region (NWR), Regional Planning

Expertise:

Roles: *including status and contribution*

Business Area Expert (Established)

Signs project working group member.

Manager, NW Science and Information

Organization: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northeast Science and Information Section (NESI)

Expertise:

Roles: *including status and contribution*

Information Owner - Contact (Established)

Information Owner contact shared with Manager, NW Science and Information

Manager, NW Science and Information

Organization: Ministry of Natural Resources (MNR), Science and Information Resources Division (SIRD), Science and Information Branch (SIB), Northwest Science and Information Section (NWSI)

Expertise:

Roles: *including status and contribution*

Information Owner - Contact (Established)

Information Owner contact shared with Manager, NE Science and Information

NRVIS Application

Organization: Ministry of Natural Resources (MNR), Field Services Division (FSD), ALL MNR DISTRICTS

Expertise:

Roles: *including status and contribution*

Publisher (Established)

Updates made to this data class via the NRVIS application/database will be automatically published to the Land Information Ontario Warehouse.

Metadata

This section describes metadata about the Data Class (a.k.a. Concrete Class in NRVIS).

*Fields prefixed with an asterisk * are required by OLID for the creation of an official metadata record.*

General Information

This section provides general details about the Data Class.

MNR Sign Site (MNRSIGN)

*Represents the site where a sign is posted and maintained by, or is of interest to the Ontario Ministry of Natural Resources (OMNR). These signs serve a variety of purposes for OMNR business areas, ranging from providing general information and safety warnings, to enforcement and land management notices to the general public.

Data Class Business Area Usage

***Use Purpose:**

1. To inventory signs that belong or are of interest to the OMNR within each District,
2. To have a provincial standard for storing and maintaining the spatial locations and associated attributes for these signs (NRVIS)
3. Used to plan and prioritize site visits to where these signs are posted.
4. The OMNR exercises due diligence in knowing where these signs are posted.

***Legislative Req./Authority:** MNR signs are erected to support and enforce various provincial acts such as:

- Fish and Wildlife Act
- Lands and Waters Act
- Public Lands Act

Use Cautions:**Business Identifier(s):**

Business Identifier (B.I.): Sign Identifier

B.I. Database(s): NRVIS

B.I. Rules: Not enforced for how the identifier is derived and assigned by business areas. A suggested format is CCC-NNN whereas:

CCC: 3 character OMNR District code prefix e.g. DRY (Dryden District)

- : separator (hyphen)

NNN: 3 digit sequential number, with leading zeroes, uniquely assigned to each sign in the District (e.g. 003)

Using the example above, the sign identifier is 'DRY-003'

Analysis Notes:

Data Class Vintage Details

This section provides details about the data's currency¹ within NRVIS/OLIW for this Data Class.

***Collection Start Date:**

***Collection Recent Date:**

***Dataset Vintage Comments:** Sign locations and information will be loaded into NRVIS as they are known.

***Update Frequency:** *Please refer to 'Publish Function' of 'Maintenance' Section.*

***Current Collection Status:** Ongoing

Data Class Geospatial Details

Details about the Data Class' geographic extent and topology rules within NRVIS/OLIW

Business Area Spatial Rules: For ease of maintenance, one point will be added in NRVIS for each sign, even if they are in close proximity to one another at the site.

NRVIS/OLIW Abstract Class: SPSPT

Abstract Spatial Single-Point User Object. One and only one point forms a single object.

Examples of sub classes of this class include feature types such as cabin, bird-nest, fire tower, etc...

***Geographic Extent:** Region, NE/NW

***Geographic Completeness:** Collected by respective OMNR Districts.

Zoom to Name? *If 'Yes', identify the Attribute:* No

Note: the following italicized entries are defaulted for a NRVIS/OLIW spatial Data Class.

***Grid or Coordinate System:** *Geographic (Lat., Long.)*

***Map Projection:** *Not Applicable*

***Horizontal Datum:** *NAD83 CNT*

***Horizontal Positional Accuracy:** Within 2 metres

***Vertical Datum (z-scale):** *Not Applicable*

***Vertical Positional Accuracy:** *Not Applicable*

Interlayer Dependency? No

Nested? No

Consolidation? No

Data Class Sources

This section provides details about the sources used to create/add data to the Data Class in NRVIS/OLIW. Fields prefixed with an asterisk () are required by OLID.*

***GPS MNR sign locations**

***Source Type/Medium:** Direct Field Collection

***Acronym(s):** GPS

***Description:** MNR Sign locations are captured with GPS units by MNR staff, along with basic attributes.

***Vintage/Quality:** The captured GPS locations will have a higher degree of locational accuracy.

Geographic Extent:

Map Scale(s):

***Owner/Creator:** Ministry of Natural Resources (MNR), Field Services Division (FSD), All OMNR Districts.

Location: MNR Districts

¹ Vintage as of this document's publishing date. Please refer to the **Caveat** in this document's Preface.

Contribution (Overall): Provides a spatially accurate source of information for loading sign locations into NRVIS.

Comments:

This Source is applicable to all Geographic Unit Types (GUT) for this Data Class.

Data Class Information Products

How the Data Class contributes to the creation of business area information products.

MNR Sign Site does not have any documented products.

Data Class Maintenance Standards

This section provides details about the common data life-cycle functions and standards used to maintain this Data Class. The agency responsible for the entire process is identified in the 'Contacts' section of this document.

Collect function

Performer

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: Resource Technicians

Agency Location(s): Within District

Frequency: As required or as scheduled.

Area of Responsibility

Type: District

Name:

Procedures/Standards: Technicians will record 1 set of GPS coordinates for each sign at the site. Required attributes will also be collected at that time.

Training/Expertise: GPS

Tools/Forms/Applications: GPS Unit. ArcPad.

Q/A Performer

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts. Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: Resource Technicians

Q/A Procedures/Standards: Ensure that required information is collected according to standard.

Convert function

Performer

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: GIS Technician

Agency Location(s): Within District

Frequency: As soon as collected data is available.

Area of Responsibility

Type: District

Name:

Procedures/Standards: GPS information collected will be converted (only if necessary) to NRVIS standard prior to loading the information into NRVIS.

Training/Expertise: Familiarity with GIS and GPS.

Tools/Forms/Applications: GPS software, ESRI products.

Q/A Performer

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: GIS Technicians

Q/A Procedures/Standards: Ensure that required information is collected

Load function**Performer**

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: GIS Technician

Agency Location(s): Within District

Frequency: As soon as converted data is available.

Area of Responsibility

Type: District

Name:

Procedures/Standards: GIS Technician will import new sign site information directly into NRVIS through the NRVIS application. Sign Information collected by other MNR Business Areas (e.g. AFFM) will use existing arrangements followed by Districts and GSO/GIS Tech for the inclusion of their data into NRVIS. 'Supporting Material' common table may be used to reference the pathnames/locations of digital photographs taken of the sign(s) and filed either via ODMS or locally. 'Supporting Material' may also be used to document the pathnames/locations of signed authority forms associated with the sign(s).

Training/Expertise: Familiarity with the data class and NRVIS.

Tools/Forms/Applications: NRVIS Application

Q/A Performer

Org: Ministry of Natural Resources (MNR), Field Services Division (FSD), All MNR Districts.

Position: GIS Technicians

Q/A Procedures/Standards: Ensure that collected information has been successfully loaded into NRVIS (NRVIS view of data, maps etc.)

Publish function**Performer**

Org: Ministry of Natural Resources (MNR)

Position: NRVIS Application

Agency Location(s): Central server (Peterborough)

Frequency: Whenever there is new/revised information to be published to the Land Information Ontario Warehouse.

Area of Responsibility

Type: Province

Name: Ontario

Procedures/Standards: Automated function.

Training/Expertise: N/A

Tools/Forms/Applications: NRVIS database script and routines to publish information to the Warehouse.

Q/A Performer

Org: Ministry of Natural Resources (MNR)

Position:

Q/A Procedures/Standards: All updates to the data will be published to the warehouse from NRVIS.

Data Class Access Standards

This section provides details about the access management to the information stored in this data class.

***OLID Record Audience:** Public

***Use Restrictions/Constraints:**

Special Edit Rules: Only signs that belong or are of interest to the MNR are to be added to this data class in NRVIS.

***Data Class Distribution:** LIDS (to Forest Industry via Forest Information Portal - if required)

Sensitivity Classification

The Sensitivity Classification assigned to this Data Class by the Information Owner.

MNR Sign Site is classified as **Non-Sensitive**

Justification: The locations and information stored in this data class is deemed to be non-sensitive.

Accessibility: Data will available for viewing by general public.

Classification Authority: Please refer to the 'Contact Roles and Responsibilities' section.

Sensitivity Exceptions:

Geographic Unit Type Exceptions: None identified

Entity Exceptions: None identified

Geographic Extent Exceptions: None identified

Object Exceptions: None identified

LIMBS View (Warehouse interactive internet map browser)

This Section provides general information about this Data Class and its usage in IMF LIMBS Views.

General use of this data class in LIMBS views created by other business areas is permitted. The Custodian is not interested in creating a themed LIMBS View with this Data Class at this time.

LIMBS Use Limitations: Dataset is not fully populated and would be of interest to OMNR business area operations only.

LIMBS Symbology: No limits set on symbology.

Identity String: All attributes are available.

Web Mapping Service (WMS)

MNR Sign Site will be available for Web Mapping Services.

Practical WMS Usage: Dataset is not fully populated and would be of interest to MNR business area operations only.

Web Feature Service (WFS)

MNR Sign Site will be available for Web Feature Services.

Practical WFS Usage: Dataset is not fully populated and would be of interest to MNR business area operations only.

Data Class Model

This section describes the Business and/or Design View Logical Data Model for this Data Class.

Geographic Unit Types

Identifies the Geographic Unit Types (a.k.a.GUTS) associated with this Data Class.

Geographic Unit Type Summary (sorted by status and name)

Geographic Unit Type Name	GUT#	Status	Sensitivity
MNR Sign Site	69	Complete	Non-Sensitive

Geographic Unit Type Details

MNR Sign Site (69)

Description: Represents the site where a sign is posted and maintained by, or is of interest to the Ontario Ministry of Natural Resources (OMNR). These signs serve a variety of purposes for OMNR business areas, ranging from providing general information and safety warnings, to enforcement and land management notices to the general public.

Restricted Name: Same as Data Type Name

Restricted Description: Same as Data Type Description

Status (Status Date) and Comments: Complete (16/04/2007)Initial GUT

Sensitive? Classification and Rationale: No, classified as Non-Sensitive. There are no sensitivities associated with this GUT.

Target Databases: This is a NRVIS (3.3.2) AND an OLIW (2007) GU Type

Use Purpose: To inventory the locations of signage that are posted or are of interest to the Ontario Ministry of Natural Resources.

Logical Data Model (Business View)

Refer to the Appendix 1 guide on how to read an Entity Relationship Diagram (ERD).

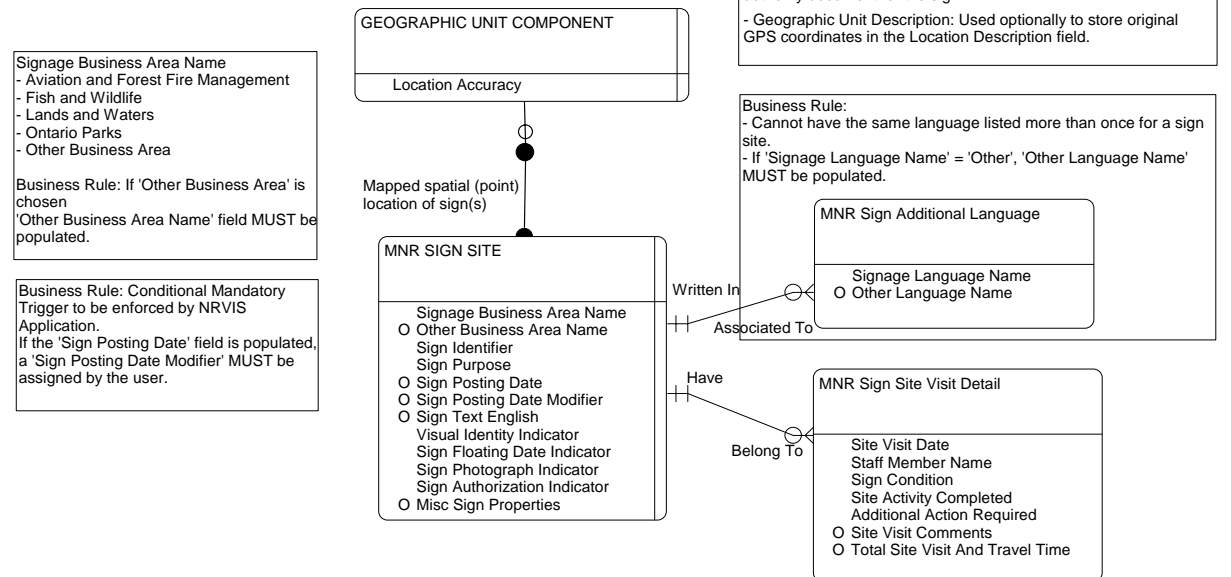
Please read Appendix 3: Business Area Model Decision Points prior to reviewing this model

Business View Logical Data Model

Data Class: MNR Sign Site (V.1)

Subset: MNRSIGN

Revised May 14, 2007



Data Dictionary

Refer to the Appendix 2 for guide on how to interpret a data dictionary.

Entity : GEOGRAPHIC UNIT COMPONENT

Description :

A Geographic Unit that may be included in a Geographic Unit Consolidation.

Location Accuracy Character (variable length string) 25 Mandatory
The degree of conformity or closeness of a measurement within the database to its true value in the world.

Class : Description

Valid values in NRVIS_LOCATION_ACCURACY.

Entity : MNR SIGN SITE

Description :

Represents the site where a sign is posted and maintained by, or is of interest to the Ontario Ministry of Natural Resources (OMNR). These signs serve a variety of purposes for OMNR business areas, ranging from providing general information and safety warnings, to enforcement and land management notices to the general public.

Signage Business Area Name Character (variable length string) 80 Mandatory
Identifies the business area responsible for posting/maintaining the sign that is of interest to the Ontario Ministry of natural Resources.

Class : Name

Valid values found in lookup table: SIGNAGE_BUSINESS_AREA_NAME

Other Business Area Name Character (variable length string) 75 Optional
An attribute used and triggered by the NRVIS application when a user chooses 'Other Business Area' as a value from the 'Signage Business Area' field. This attribute is to be used when a known business area is not available in the pick list of permissible values.

NRVIS Usage Context:

When 'Other Business Area' is chosen , a trigger will prompt the user to identify the name of the other business area in this field. If the user decides to change the sign's business area to a known one, the contents of this field will be cleared.

The values stored in the 'Other Business Area Name' field will be periodically reviewed by the Information Owner. If warranted, new values will be added to the listing of existing permissible business area names.

Class : Name

Sign Identifier Character (variable length string) 25 Mandatory
The unique identifier assigned to each sign posted by, or is of interest to the Ontario Ministry of Natural Resources (OMNR). It is used to uniquely identify and inventory these signs within each OMNR District.

The format for how sign identifiers are structured and derived may vary between MNR business areas. Managing the sequential numbering for signs will also fall under the responsibility of each respective business area.

An example of a suggested format to use within an OMNR District is as follows: CCC-NNN whereas:

CCC: 3 character OMNR District code prefix e.g. DRY (Dryden District)

- : Separator

NNN: 3 digit sequential number, with leading zeroes, uniquely assigned to each sign in a District e.g. 003

Using the example above, the sign identifier is 'DRY-003'

Class : Business Identifier

Sign Purpose Character (variable length string) 25 Mandatory

The primary purpose for posting the sign, which can be categorized as follows:

- Access Control: Signs whose purpose is to control or restrict access (e.g. road closure)
- Enforcement: Signs related to enforcement (e.g. fish sanctuaries, moose management etc.)
- General Information: Provides general information (e.g. 'This site is permanently closed')
- Recreation: For outdoor recreation and activities (e.g. no camping, camping permit required by non-residents etc.)

- Safety/Prevention: Signs posted as safety/prevention notices (e.g. water crossing removed, danger-open pit, use at own risk etc.)

Class : Description

Valid values found in lookup table: SIGN_PURPOSE

Sign Posting Date Date Optional
The calendar date that the sign was posted/erected at the site.

Format: YYYY-MM-DD e.g. 2007-01-06 (January 6, 2007).

When populated, the 'Sign Posting Date' must be further qualified by the 'Sign Posting Date Modifier' attribute.

- Enter all available calendar date information when it is available. At the minimum, the year should be known.
- When either, or both month and day values are not known, enter '01' and select the appropriate modifier.
- This field should not be populated if the posting date cannot be qualified by one of the modifiers.

See 'Sign Posting Date Modifier' attribute description for more details.

Class : Date

Sign Posting Date Modifier Character (variable length string) 15 Optional
A conditional mandatory modifier assigned by the user whenever the 'Sign Posting Date' field is populated. The modifier qualifies the 'Sign Posting Date' with one of the following permissible values:

- Actual: The actual full calendar date for posting the sign is known.
- Approximate: Only partial information about the posting date is known, e.g. year, or year and month.
- Before: The actual posting date of the sign is unknown, but was likely posted BEFORE a known year.
- After: The actual posting date of the sign is unknown, but was likely posted AFTER a known year.

Class : Description

Permissible Values :
'Actual', 'Approximate', 'Before', 'After'

Valid values are found in the lookup table: SIGN_POSTING_DATE_MODIFIER

Sign Text English Character (variable length string) 2000 Optional
A full description of the English text displayed on the sign.
Example: 'NOTICE: Unauthorized use of motorized vehicles beyond this point is prohibited from October ___ to October ___ Public Lands Act RSO 1990.'

Class : Description

Visual Identity Indicator Character (variable length string) 3 Mandatory
A 'Yes/No' indicator whether the sign conforms to the Ministry of Natural Resource's visual identity standards and directives. For more information consult <http://intra.visualidentity.mbs.gov.on.ca/>

Examples: Sign content, wording, logo placement, color scheme etc.

Default: 'Yes'

Class : Indicator

Permissible Values :
'Yes','No'

Sign Floating Date Indicator Character (variable length string) 3 Mandatory
A yes/no indicator whether there are floating calendar dates present in the sign's wording. These dates must be periodically updated by OMNR staff. For example, a sign stating:
'Closed to public vehicular travel from October__ to October__ (current year)'

The default value is 'No'

Class : Indicator

Permissible Values :
'Yes','No'

Sign Photograph Indicator Character (variable length string) 3 Mandatory
An indicator whether photographs were taken of the posted sign (Yes/No).

The default is 'No'

Use Context:

If 'Yes', the filename and location of the digital photograph(s) should be referenced in the 'Supporting Material' NRVIS/OLIW common table.

A suggested file naming standard for cataloging signage photographs is as follows:

Sign Identifier-NN whereas

Sign Identifier: Unique identifier value from the 'Sign Identifier' field

- : Separator (hyphen)

NN : 2 digit sequential number assigned to each subsequent photo taken of the sign.

Example: DRY-003-01, DRY-003-02, DRY-003-04. It is suggested that sequential numbering use leading zeroes ('0') for file sorting and retrieval purposes.

Class : Indicator

Permissible Values :

'Yes','No'

Sign Authorization Indicator

Character (variable length string) 3

Mandatory

For enforcement purposes, all signs require proper authorization to be valid and for charges to hold up in a Court of Law. This 'Yes/No' field indicates whether the sign is authorized by the Ontario Ministry of Natural Resources for posting.

If 'Yes', users may use the NRVIS common table: Supporting Material to store the name/filename and location of the authority document. For instance, filing cabinet in the district office, binder, server etc.

The default value is 'No'.

Class : Indicator

Permissible Values :

'Yes','No'

Misc Sign Properties

Character (variable length string) 2000

Optional

Miscellaneous details about the sign's properties. For example, official sign template references, custom sign dimensions, materials, sign-posting types and methods etc. This additional information may be useful if there is a need to replace/repair a sign.

Class : Description

Subtype Of GEOGRAPHIC UNIT COMPONENT

Each MNR SIGN SITE May be Have One or more MNR Sign Site Visit Detail(s). Exclusive :

Each MNR SIGN SITE May be Written In One or more MNR Sign Additional Language(s). Exclusive :

Entity : MNR Sign Additional Language**Description** :

Identifies the language found on the sign in addition to, or instead of the English wording. Only the language name will be identified, e.g. Ojogji-Cree. Users should refer to associated photographs taken of the sign for the actual wording.

Signage Language Name

Character (variable length string) 20

Mandatory

The language used in the sign's wording, other than English. Permissible values include:

- French (Default)

- Ojibwa

- Cree

- Ojogji-Cree

- Other: a language that is not available in this list. The specific name is identified in the 'Other Language Name' field.

Class : Description

Valid values found in lookup table: LANGUAGE_NAME

Other Language Name

(default) 20

Optional

Identifies the name of a language other than what is available for a user to choose from.

Class : Name

Each MNR Sign Additional Language Must be Associated To One and only one MNR SIGN SITE(s). Exclusive :

Entity : MNR Sign Site Visit Detail

Description :

Documents the details of a site visit to the sign's location. The sign's current condition and any on-site or recommended remedial action are documented (e.g. sign repairs). Staff may conduct several site visits during the sign's posted lifespan.

Site Visit Date Date Mandatory
The calendar date of when the site visit took place.
Format: YYYY-MM-DD e.g. 2007-01-06 (January 6, 2007)

Class : Date

Staff Member Name Character (variable length string) 40 Mandatory
The full name of the main staff member who conducted the site visit (e.g.: George Awdry).

Class : Name

Sign Condition Character (variable length string) 20 Mandatory
The physical condition of the sign found at the time of the site visit. Sign conditions are listed and described as follows:
- Damaged: Sign is defaced, damaged or knocked down by vandals, weather, animals or vehicles.
- Good: Sign is in good condition (structurally sound and legible)
- Missing: Sign cannot be found in the immediate vicinity of where it was originally posted.

Default: 'Good'

Class : Description

Valid values in lookup table: SIGN_CONDITION

Site Activity Completed Character (variable length string) 20 Mandatory
Activity completed during the site visit. Valid values include:
- None: No action taken.
- Repair: Repairs to the sign were completed on site.
- Replace: A replacement sign was erected to replace one that was damaged or missing.
- Update: Sign wording updated (e.g.: road access restriction dates)
- Repair and Update: Sign repairs and updates to sign wording were completed on site.

Default: 'None'

Class : Description

Valid values found in lookup table: SITE_ACTIVITY_COMPLETED

Additional Action Required Character (variable length string) 20 Mandatory
The recommended additional remedial action to be taken based on the sign's current condition and activity completed on site. Valid values include:
- None: No action is required at this time.
- Repair: Sign must be repaired (details found in 'Inspection Comments')
- Replace: Sign must be replaced.
- Update: text on sign (esp. dates) requires updating.
- Repair and Update: Repairs and sign wording updates are required.

Default: 'None'

Class : Description

Valid values found in lookup table: ADDITIONAL_ACTION_REQUIRED

Site Visit Comments Character (variable length string) 2000 Optional
Additional comments about a site visit. Useful if remedial action was taken or is required. For example, comments about a sign site visit: 'Re-affixed sign to tree' or 'Sign post is rotten and needs to be replaced.'

Class : Description

Total Site Visit And Travel Time Numeric 4 2 Optional
The total time in hours taken by staff to complete a site visit. It includes the travel time to and from the site. Values less than an hour e.g. 30 minutes are to be entered as its decimal equivalent (.50 hr). Used for internal auditing purposes where there is a cost associated with travel.

Class : Time

Each MNR Sign Site Visit Detail Must be Belong To One and only one MNR SIGN SITE(s). Exclusive :

Lookup Table Index

Lookup table definitions and values referenced by Data Class attributes in this document.(Refer to Data Dictionary)

Note: Lookup tables with 200+ records will not have their values listed in order to conserve space. A complete listing of values for these tables can be obtained by contacting the OLIW Help Desk. (Refer to document's Preface.)

Lookup Tables with 2-3 Business-Defined Columns

Table Name: ADDITIONAL_ACTION_REQUIRED				
Properties				
Field Name	Type	Size	Class	Description
ADDITIONAL ACTION REQUIRED	Text	20	Primary Key	
ADDITIONAL ACTION REQUIRED DESCR	Text	255	Description	
ADDITIONAL ACTION REQUIRED		ADDITIONAL ACTION REQUIRED DESCR		Expired?
None		No action is required at this time.		
Repair		Sign must be repaired (details found in 'Inspection Comments')		
Repair and Update		Repairs and sign wording updates are required.		
Replace		Sign must be replaced.		
Update		Text on sign (esp. dates) requires updating.		

Table Name: SIGN_CONDITION				
Properties				
Field Name	Type	Size	Class	Description
SIGN_CONDITION	Text	20	Primary Key	
SIGN_CONDITION_DESCR	Text	255	Description	
SIGN_CONDITION		SIGN_CONDITION_DESCR		Expired?
Damaged		Sign is defaced, damaged or knocked down by vandals, weather, animals or vehicles.		
Good		Sign is in good condition (structurally sound and legible).		
Missing		Sign cannot be found in the immediate vicinity or where it was originally posted.		

Table Name: SIGN_LANGUAGE_NAME				
Properties				
Field Name	Type	Size	Class	Description
SIGN_LANGUAGE_NAME	Text	25	Primary Key	
SIGN_LANGUAGE_NAME_DESCRIPTION	Text	255	Description	
SIGN_LANGUAGE_NAME		SIGN_LANGUAGE_NAME_DESCRIPTION		Expired?
Cree				
French				
Ojibwa-Cree				
Ojibwa				
Other		A language that is not available in this listing. Identify this language in the 'Other Language Name' field.		

Table Name: SIGN_POSTING_DATE_MODIFIER				
Properties				
Field Name	Type	Size	Class	Description
SIGN_POSTING_DATE_MODIFIER	Text	15	Primary Key	
SIGN_POSTING_DATE_MODIFIER_DESCRIPTION	Text	255	Description	
SIGN_POSTING_DATE_MODIFIER		SIGN_POSTING_DATE_MODIFIER_DESCR		Expired?
Actual		The actual full calendar date for posting the sign is known.		
After		The precise posting date of the sign is unknown, but was likely posted after a known year.		
Approximate		On partial information about the posting date is known, e.g. year, or year and month.		
Before		The precise posting date of the sign is unknown, but was likely posted before a known year.		

Table Name: SIGN_PURPOSE				
Properties				
Field Name	Type	Size	Class	Description
SIGN_PURPOSE	Text	25	Primary Key	
SIGN_PURPOSE_DESCR	Text	255	Description	
SIGN_PURPOSE		SIGN_PURPOSE_DESCR		Expired?
Access Control		Signs whose purpose is to control or restrict access (e.g. road closure)		
Enforcement		Signs related to enforcement (e.g. fish sanctuaries, moose management etc.)		
General Information		Provides general information (e.g. 'This site is permanently closed')		
Recreation		Signage associated with outdoor recreation and activities (e.g.: no camping, camping permit required by non-residents etc.)		
Safety/Prevention		Signs posted as safety/prevention notices (e.g. water crossing removed, danger-open pit, use at own risk etc.)		

Table Name: SIGNAGE_BUSINESS_AREA				
Properties				
Field Name	Type	Size	Class	Description
SIGNAGE_BUSINESS_AREA_NAME	Text	40	Primary Key	MNR_SIGN_SITE.SIGNAGE_BUSINESS_AREA
SIGNAGE_BUSINESS_AREA_DESCR	Text	255	Description	
SIGNAGE_BUSINESS_AREA_NAME		SIGNAGE_BUSINESS_AREA_DESCR		Expired?
Aviation and Forest Fire Management		Signage posted/maintained by OMNR's Aviation and Forest Fire Management Branch.		
Fish and Wildlife		Signage posted/maintained by OMNR's Aviation and Fish and Wildlife Branch.		
Lands and Waters		Signage posted/maintained by OMNR's Lands and Waters Branch.		
Ontario Parks		Signage posted/maintained by OMNR's Ontario Parks program.		
Other Business Area		Signage posted/maintained by a business area other than what is currently available in the listing of permissible values.		

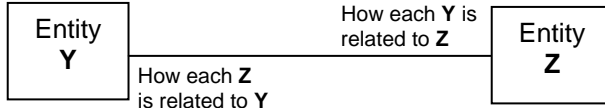
Table Name: SITE_ACTIVITY_COMPLETED				
Properties				
Field Name	Type	Size	Class	Description
SITE_ACTIVITY_COMPLETED	Text	20	Primary Key	
SITE_ACTIVITY_COMPLETED_DESCR	Text	255	Description	
SITE_ACTIVITY_COMPLETED		SITE_ACTIVITY_COMPLETED_DESCR		Expired?
None		No action taken.		
Repair		Repairs to the sign were completed on site.		
Repair and Update		Sign repairs and updates to sign wording were completed on site.		
Replace		A replacement sign was erected to replace the one that was damaged or missing.		
Update		Sign wording updated (e.g. road access restriction dates)		

Appendix 1: Reading an Entity-Relationship Diagram

A modeler can define the data needs of a business using an **entity relationship diagram** (ERD). An ERD is a schematic representation showing entities and their relationship to other entities. An **entity** is a data object and a **relationship** is a model of the association between objects of one or more different entities. In an ERD, entities are rectangles connected to other entities by relationship lines. (Official definition excerpt from the *Information Modeling Handbook for the OPS – Ontario Government Management Board Secretariat Corporate Architecture Branch*)

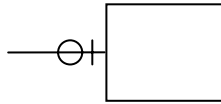
You will encounter the following symbology in an ERD.

General Notation: Text that describes a relationship between entities.

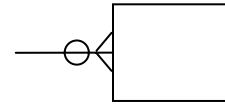


Relationship Cardinality Symbols:

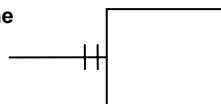
There *may* be **zero or one** occurrence of this entity. This means that the entity is optional.



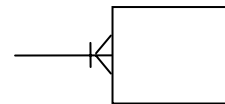
There *may* be **zero or more** occurrences of this entity. The relationship is optional.



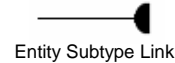
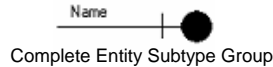
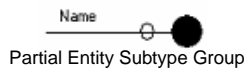
There *must* be **one and only one** occurrence of this entity. This means that the relationship is mandatory.



There *must* be **one or more** occurrences of this entity. The relationship is mandatory.

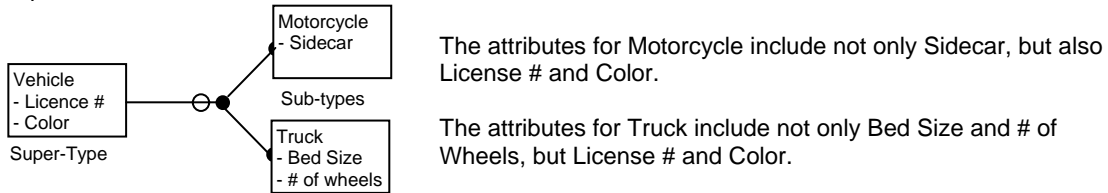


Entity Sub-type Groups: Entity subtype group icons link sub-type entities to the super-type entity. All subtype entities inherit the characteristics of the super-type entity. For example:



Group icons link subtype entities to the super-type entity. All subtype entities inherit the characteristics of the super-type entity. For example:

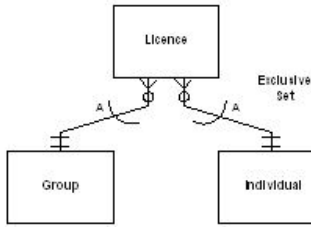
The circle indicates that the definition of subtypes for the super-type Vehicle is only partially complete. A line in this same location would indicate that all possible subtypes have been defined – indicating it as complete.



Types of vehicles that have not be explicitly defined would inherit only the characteristics of the Vehicle entity e.g. Car, ATV.

Exclusive Set:

An Exclusive Set describes a relationship between entities where, at any one time, only one of the relationships can be true. For example:



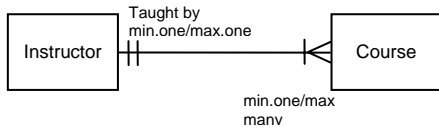
A Group *may* be the holder of one or more Licences.

An Individual *may* be the holder of one or more Licences.

A License *must* be issued to one and only one Group **or** One and only one Individual.

One license cannot be issued to both a group and an individual.

Additional Examples:



Interpreted as:

An Instructor *must* be teaching one or more Courses.

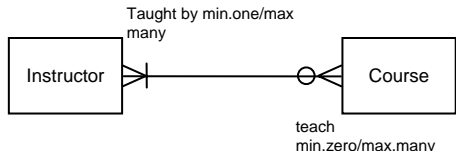
A Course *must* be taught by one and only one Instructor.

An Instructor cannot exist unless they teach a course.

A Course cannot exist unless it has an Instructor. Tag-Team teaching by Instructors is not permitted.

Instructors must be assigned to a course to be valid.

If the business rules are breached, the relationship between entities is incorrect. (See next example)



Interpreted as:

An Instructor *may* be teaching one or more Courses.

A Course *must* be taught by one or more Instructors.

A newly hired Instructor, not yet assigned to a course, can exist.

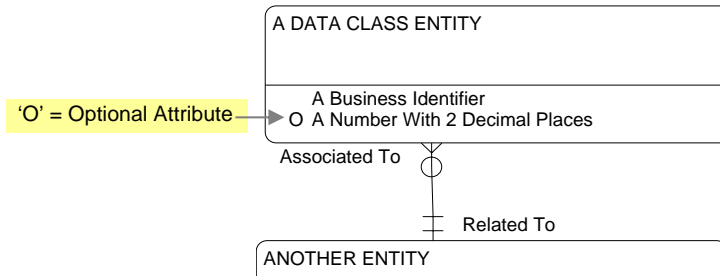
A new inexperienced Instructor, can be paired up with an experienced Instructor to teach a course until they are confident to teach solo.

A Course cannot exist unless it has an Instructor.

Once again, if the business rules are breached, the relationship between entities is incorrect.

Appendix 2: Interpreting a Data Dictionary

General guidelines on how to interpret a Business View Logical Model Data Dictionary



Entity : A DATA CLASS ENTITY

2 Description :
This is an example of a Entity Description

4 A Business Identifier
This is the main Business Identifier.

8 Class : Business Identifier

4 A Number With 2 Decimal Places
This is an example of a Data Item description.
This is an example of an Attribute Description.

8 Class : Measurement

9 This is an example of a Business Definition.

10 Each A DATA CLASS ENTITY Must be Associated To One and only one ANOTHER ENTITY(s). Exclusive :

Character (variable length string) 25 Mandatory

Numeric 3 2 Optional

1. Entity Block
2. Entity Name and Description
3. Attribute Block
4. Attribute name (underlined) with item description (below). Sometimes, the item is also described at the attribute level to describe its specific usage within an entity.
5. Field Type. E.g.: Character, Numeric, Date etc...
6. Field Length and where applicable – number of decimal places. The maximum capacity for a field's content is determined by the Item's set length. With the examples above...
 - The 1st item has been defined as a Character (Variable length string) field, with a maximum length of 25 characters.
 - The 2nd item has been defined as a Numeric field with a width of 3 including 2 decimal places. (9.99)
 Other numeric definition examples: 99.99 would be defined as 4 2, 999.9 as 4 1, 999 as 3 0 etc...
 Whenever numeric data items are defined, it is good practice to include an example in the item's description.
7. Attribute Optionality within Entity. Optional attributes are prefixed with an 'O' within an Entity's ERD.
8. Logical Class of the Data Item. Examples include:
 - Business Identifier: a field used by a business area as a reference to obtain more information.
 - Code: Where values are stored as a code – with the full value sometimes stored in a corresponding lookup table.
 - Date: For storing date information e.g.: Year, full or partial dates, character dates etc...
 - Description: For storing long descriptions.
 - Flag: Where the field is used to store a condition that may be used by the business area to trigger an event.
 - Identifier: Where field is used to store an identifier e.g.: a Licence Number.
 - Indicator: Usually Boolean e.g. Yes/No
 - Measurement: The unit of measure is also defined e.g.: mm, feet, kilograms etc...
 - Name: Where field is used to store a name. e.g.: Lake Rome
 - Quantity: Where a field stores a value that measures quantity. E.g.: Number of Moose Observed: 12
9. Business Definition. E.g.: *Valid Values in NRVIS_2NUM Lookup Table*
10. Entity Relationship Description

Appendix 3: Business Area Model Decision Points

Please read this section prior to reviewing the data model Schema and Data Dictionary.

Decision points made by the business area (MNR Signs Working Group) that influenced the data model.

Data Class Scope:

The scope of the data class was changed to include all signs posted and maintained by, *or is of interest* to the OMNR. This makes the data class more flexible to include signage that the MNR has a vested interest in knowing about, but may have been posted by a third party.

Spatial Representation:

For ease of maintenance and retrieval, the MNR Signs Working Group recommended adding a point location for each sign, even if they are on the same signpost, or are in close proximity to one another. ESRI's ArcMap software, upon which the NRVIS application is engineered on, has map product spatial conflict resolution capabilities to prevent clutter.

Geographic Unit Types (GUTS)

One Geographic Unit type.

MNR Sign Site: Main Feature Class Table

Signage Business Area Name (M): Attribute used to identify the business area responsible for the sign.

Other Business Area Name (O): Suggested by Kevin Casselman

Usage is triggered by the NRVIS application whenever the user classifies a feature under 'Other Business Area' in the '**Signage Business Area Name**' field. When this value is chosen, the user will be prompted to identify a business area name.

The Information Owner will periodically examine the contents of this field to determine whether new Signage Business Area Name(s) are warranted. If so, they will be appended to the lookup table.

If the user later classifies the object under a different 'Signage Business Area Name', the contents of this field will be cleared.

Sign Identifier (M): Format

Since each business area may have a unique method in deriving or assigning a sign identifier, it was felt by the Working Group that a specific format be enforced by the NRVIS application. Instead, a 'suggested' sign identifier format has been given as a standard guide.

Sign Purpose (M): list of values

The existing list of values is generic enough that most, if not all of them can be applicable to multiple business areas. The user group preferred this generic short list over a longer one, and there were no requests to expand this list as a result of the broader NRVIS User Community review.

Visual Identity Indicator:

The addition of this attribute resulted from conversations with Ontario Parks, when they were asked whether they wished to participate in the MNR Signs project (unfortunately, not at this time due to other business area priorities). Many signs conform to the MGS/MNR's visual identity

policy and directives. This attribute may be beneficial to inventory legacy or third-party signage of interest to the MNR which do not conform to today's standards.

The default is set to 'yes', because the majority of posted signage over the past 15 + years conform to the OMNR's visual identity standard.

Sign Authorization Indicator:

Requested during the broader NRVIS user-review by Mary Lyons, Lands & Waters Technical Specialist, Timmins. Refer to attribute's description in data dictionary for its intended purpose.

Sign Posting Date (O) and Sign Posting Date Modifier (O):

The sign posting date is optional, since many signs posted in a District may not have that information available. If the date is not known the field is left blank.

The 'Sign Posting Date Modifier' is conditional mandatory if the 'Sign Posting Date' field is populated by the user. The chosen modifier accommodates actual, approximate or when it is known when signage was known to exist before or after a calendar date.

(Adapted from the MNR Road Segment data class model)

Sign Text English (O)

Optional because this information may not be readily available for all signs (legacy info). A few signs may only have a universal symbol on them instead of written text.

The Working Group decided that this attribute be included in the main feature class table for direct querying of sign sites to retrieve desired information.

When querying this field for specific information the user should use the 'Like' operator with wildcards (e.g. '%Fish Sanctuary%').

MNR Sign Additional Language (optional one to many table)

The Working Group consensus for this optional table was that it would be impractical to store the full sign wording text for a language(s) other than English. The rationale for not doing so was mainly for language font/character/keyboard differences that would be difficult to maintain this information with.

Only the additional 'Signage Language Name' will be identified, and the 'Other Language Name' field populated if a name is not available in the listing of permissible values.

The Working Group recommends that users would refer to any existing signage for the different language version of the sign text. In addition to the English text, although infrequent, there is a potential to have more than 2 languages on the sign.

Sign Floating Date Indicator (M)

Added to model to flag signs where staff must seasonally visit the posting site to alter any dates present on these signs. Can be used to schedule and prioritize site visits. Decided by the group to be defaulted to 'No'.

Sign Photograph Indicator (M)

When set to 'Yes', the user knows that a photograph was taken of the sign, and should be referenced in the NRVIS common table 'Supporting Material' (e.g. photograph posted to ODMS, District Server, Files etc.). It was felt by the group that the default be 'No'.

Misc Sign Properties (O)

This designation is a catch-all field for any additional signage properties that the business area wished to capture (e.g. Sign template refs, dimensions, material, posting types, post materials etc.). The intention was to keep the model simple, rather than including additional fields to collect additional properties such as the ones described above).

MNR Sign Site Visit Detail (optional one to many table)

Used and endorsed by the Working Group as a means to document multiple site visits to where a sign is posted. Noteworthy decision points made for the attributes collected for a site visit are:

Staff Member Name: (M) Does not contravene FIPPA rules (confirmed with IAS), and the WG recommended that only the lead staff member conducting the site visit be documented (instead of potentially documenting several)

Sign Condition: (M) Documents the condition of the sign upon staff arrival to the site.

Site Activity Completed: (M) Oftentimes, based on the sign's condition, remedial action is performed and completed on site. If not...

Additional Action Required: (M) Recommended action to be taken into account prior to the next site visit.

Total Site Visit and Travel Time: (O)

Removed Signs:

The Working Group decided that there wasn't a need to keep the former locations of 'removed' signs in the database.

It will be at the discretion of the business area whether this and other associated information (e.g. photograph references, site visit details etc.) should be locally backed up prior to deleting a sign site.

ArcGIS 9.2's history capabilities will be explored in the near-future with respect to how it may be applied to this and other data classes.