(R) ITIS Phrase Lists (International Traveler Information Systems)

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1. Scope

This standard provides a table of textual messages meeting the requirements for expressing "International Traveler Information Systems" (ITIS) phrases commonly used in the ITS industry.[1] The tables provided herein follow the rules of SAE J2540 and therefore allow a local representation in various different languages, media expressions etc… to allow true international use of these phrases. The phrases are predominantly intended for use in the description of traffic related events of interest to travelers and other traffic practitioners. Other phrases exist for other specific specialty areas of ITS, and all such phrases follow a set of encoding and decoding rules outlined in SAE J2540 to ensure that the use of these phrases in messages remains interoperable between disparate types of user equipment.

This standard SHALL define the normative index values to be used to provide phrases needed by ITS practitioners. This standard provides non-normative textual phrases which MAY be used by implementers to ensure intelligible results. This standard SHALL define the normative index values and textual phrases to be used in the defining ASN.1 and shall provide similar expressions in XML. This standard SHALL follow the formats and rules established in SAE J2540 in the expressions, manipulations, and use of such tables.

It should be pointed out that within the rules established by this standard a variety of final tables are all considered "compliant" with the standard, and may vary as fits the needs of implementers.

1.1 Rationale

The purpose of this SAE Standard is to enable the rapid development of the market for ATIS products and services by establishing a common set of phrases that can be used to describe many types of traffic and transit events and incidents.

2. References

2.1 Applicable Documents

2.1.1 SAE Publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

J2540—Messages for Handling Strings and Look-Up Tables in ATIS Standards, July 2002

J2540/1—RDS Phrase Lists, July 2002

J2540/3—National Names Phrase List, January 2002

J2313—On-Board Land Vehicle Mayday Reporting Interface, May 2000

J2369—Standards for ATIS Message Sets Delivered Over Reduced Bandwidth Media, June, 2000

3. Definitions

The definitions found in SAE J2540 are incorporated herein.

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[1] Note that the acronym and definition have changed over time. Originally, the "International Traveler Information Interchange Standard" (ITIIS) was proposed by the ENTERPRISE Project (1993), based on a North American adaptation of early European RDS codes. It never became a formal standard, but was widely used and adapted. See: http://enterprise.prog.org/completed/itis.htm. ENTERPRISE now calls this the "Intelligent Transportation Information System" (ITIS). SAE ATIS has adopted the term "International Traveler Information System" (ITIS) for the formally adopted U.S. code list (SAE J2540.2).

4. Overview

This standard provides a set of phrases intended to describe traffic incident situations of interest to the traveler. It is intended to be used in all ATIS message set standards, and is expected to be also used in a number of other ITS industry standards as well. The sole exception to this is expected to be some very limited bandwidth media devices (and example would be the RDS SubCarrier media) when only a single phrase code can be allowed.

The specific rules of use can be found in the standard describing the message which uses these phrases. This document defines the phrases themselves. The SAE J2540 document defines the use of the phrases in practice, while each using standard defines the placement of the phrases in a message and any additional restrictions which are needed. Thus, all uses of the phrases adhere to the rule set defined in SAE J2540, but not all messages, or all media, allow support for the full set of possible features. Two specific examples are worthy of note. SAE J2369, Revision 1.0 allows only a subset of the phrase table rules because this standard was established before the more general rules of J2540. In the "ERM Message" of the TMDD message set[2], some similar restrictions are used. For example, the insertion of free text is not allowed. Consult the specific standard for complete rules and restrictions with regard to using the phrases.

The phrases outlined in this document often also serve as a "prompting" text in many traffic system operator console designs, which when sent may involve further translations. Although this is beyond the scope of this standard, using the various phrases to assist operators in correctly assembling a suitable descriptive phrase is highly encouraged.

5. Operating Concepts

This section outlines the use of the contents of the table messages and data element structures and provides an overview of the operational exchange used in message transactions.

5.1 Use in General ITS messages

The basic concept of the ITIS phrases is that a collection of short textual phrases can be used the vast majority of the time to express common traffic situations and can be easily coded, and therefore, standardized as a sequence of numbers. Various uses of these numbers can then occur at the received end. For the purposes of a preliminary operating concept, we will consider that they are simply reconstituted into the same textual phrases at the receiver.

The purpose of this document is not to establish the best possible set of such phrases. That is an unobtainable goal, as local practices vary, the need for new phrases is always present, and other maintenance issues arise. These are all dealt with in SAE J2540 and will not be considered here further.

When used in general messages there are a number of patterns which are allowed in order to meet user and data issuer needs. Consult J2540 for a complete discussion of this, including the rules for using tokens to separate indexes from text. Conceptually two major types of uses are found:

1. Strings which are mostly free text with the occasional index-phrases inserted as needed

2. Strings which are mostly sequences of index-phrases with occasional free text inserted as needed

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[2] Institute of Transportation Engineers (ITE) and American Association of State Highway and Transportation Officials (AASHTO), Traffic Management Data Dictionary (TMDD) and Message Sets for External Traffic Management Center Communications (MS/ETMCC), Standards for Traffic Management Center-to-Center Communications, Rev. 2.1, June 2005.

The latter is most common and SHOULD be preferred when data creation implementers have a choice. Implementers of data reception equipment should be prepared to accept any valid J2540 format.

The ITIS list provides a rich set of useful phrases, and as a result is intended to largely reduce the need to use "free text" in creating the composite phrase. Such text is typically limited to "unusual noun" terms or unique explanatory phrases, such as that shown within the brackets of the following: "Rail Service Not Operating Due to: Herds of [pink] Animals, [watch out slippery spot on road surface] Hazardous materials spill ". When such text is used, it is recommended that the resulting phrase set remains useful if the additional free text information is removed, which may occur in some delivery environments.

Observe also that this document provides no recommendation regarding the ordering of such phrases; as a result syntactically valid messages which produce poorly constructed human language can result. Some standards users address this in varying degrees of detail, but in general it is a function of the message creation system and not covered by the various message sets.

Regardless of which format of string content ordering is used, implementers SHALL follow the rules and process of SAE J2540 to insure that successful encoding and decoding of the data shall occur by any party using this standard.

In anticipation of making SAE ATIS messages more like those found in the rest of ITS (notably TMDD in this case), it is recommended that implementers group message content into three distinct areas of "description of the event," "cause of the event" and "advice regarding what to do," and append all three areas into a single textual stream when the bearer message does not provide separate areas for each of these. Further, between the first and second items, the phrase "Due to: " should be inserted, and between the last two, the phrase "Advice: " should be inserted. It is anticipated that future revisions of the ATIS standard will provide three distinct places to insert SAE strings [to be labeled *description*, *cause* and *advice*] and that the last two will be optional in nature. When mapping message content from another ITS message which supports this three-part construction to one which does not, the above recommendation SHOULD be followed.

5.2 Use in RDS systems[3]

In general, the ITIS phrases cannot be used in the existing RDS media; however the vast majority of so-called RDS systems are not in fact using a SubCarrier transmission media (the point of actual restriction) but are in fact using the RDS phrases as a convenient interim standard from which to construct textual descriptions. It is recommended that these users SHOULD revise their systems to use the ITIS phrases (as well as other ITS message set standards) as conditions allow.

This requires some degree of mapping to take place and ultimately must be decided by the implementers as best fits local needs. In mapping from the use of RDS phrases to that of ITIS phrases, two general cases occur.

In the first case, a single RDS message can be mapped to one or more ITIS messages. At times this mapping is subjective, but as ITIS offers a wider set of expressions this is not overly problematical. An example would be RDS phrase #324 which is rendered as "Disabled vehicle, Right lane blocked ". An equivalent message made up of three ITIS components would be [0534,8196,0775] which is rendered as "disabled vehicle right lane blocked ". Observe that capitalization and punctuation marks can vary slightly in this.

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[3] RDS (Radio Data System) was originally developed by the European Broadcasting Union. See http://www.rds.org.uk/rds98/rds98.htm. The traffic message channel (TMC) is a specific application of RDS (see http://www.tmcforum.com/). A set of standards known as the RDS-TMC ALERT C family is presented in ISO 14819, parts 1, 2, and 3.

The second case involves the limited use of numerical values in messages. Historically RDS allowed only a few "common" numbers to occur in the messages.[4] In ITIS phrases, as a function of the methods of SAE J2540, numerical values can be inserted in between phrases as needed to express values.[5] An example would be RDS message #421 which is rendered as "Closed ahead, Stop and go traffic for 5 miles". An equivalent message made up of ITIS components would be [0771,0258,7721,0005,8712] which is rendered as "Closed ahead Stop and Go traffic for 5 miles ". Depending upon the way in which the numeric value is encoded, ordinal post fix characters can also be automatically added at expansion. In addition, a list of common unit values (seconds, minutes, dollars, mph, miles, etc…) is also present in the ITIS list.

A number of the "message canceled" type of phrases have been preserved in ITIS list for backward compatibility. As an operational concept the use of the these phrases is not encouraged. Specific messages of this type which may be removed or replaced in the future are denoted with the comment "Not Recommended" in the tables.

In addition it should be pointed out that the data contents found in the ATIS messages (and the rest of ITS) contain a broad spectrum of other elements which are intended to hold concepts like the time period over which a message is valid. These data elements SHOULD be used as intended and the phrase sections of the message SHOULD NOT be used to circumvent them.

5.3 Use in the TMDD ERM Message

When used in constructing an Event Reporting Messages (ERM) message from the TMDD MS/ETMCC message set some additional considerations and restrictions apply in order to maintain a dual perspective on the encodings found in the ERM message. This allows an "ERM-centric" practitioner to exchange data with an "ATIS centric" one without involving translations which would detract from interoperability.

The key to this dual view is to appreciate that ATIS tends to view a collection of phrases as representing one atomic element which can be uniformly handled upon receipt, while the ERM perspective describes an event element as the structured combination of phrases, causes, advice, quantifiers and free text, each in its own ASN1 element. Both perspectives are valid. ERM receiving implementations can use this to good effect in various sorting and automatic classification functions (which the SAE perspective also supports). The following is an excerpt from the key portion of the ERM message.

```
Event-description ::= CHOICE {

        event-phrase            [1]      SEQUENCE OF Event-type,

        event-cause             [2]      SEQUENCE OF Event-type,

        event-advice            [3]      SEQUENCE OF Event-advice,

        event-quantities        [4]      SEQUENCE OF Event-quantities,

        event-additional-text   [5]      SEQUENCE OF Event-additional-text    }
```

The heart of the dual view is that first three elements above fragment of code is considered the same as the one below, expressed in a more "ATIS centric" way.

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[4] The latter "multi-block" RDS messages of Alert+ does allow a value to be delimited in an element of the message which is then inserted into the phrases based on a predetermined use and location. This was considered and rejected in favor of having a more generalized approach in J2540.

[5] Not all uses of ITS can support this; for example ERM (a message which is part of the TMDD standards) prohibits numeric and free text insertions. In the ERM case, other elements in the message can contains such values.

Event-description ::= CHOICE {

     event-phrase   [1]   TheString,

     event-cause   [2]   TheString,

     event-advice   [3]   TheString }

In both cases, a common code list is used. The ERM elements of *EventType* and *EventAdvice* map directly to the 16-bit values used in ITIS. From an ERM perspective the first octet represents which data element (i.e. *EventTypeXXX*) is used, while the second octet represents the specific phrase code of the phrase within the data element. Implementers are urged to review both the ERM message specification in the TMDD standard and the SAE J2540 standard to fully understand the low level ASN1 tagging issues involved.

Harmonization of these lists will be maintained by the ITE and SAE as a part of the data registry process. Observe that the ASN1 terms provided in TMDD are in fact the ASN1 value enumerations for each code. The recommended text for the code is defined by this document. In most cases, it is readily derived from the ASN1 definition used in ITE.[6]

There are several additional restrictions in using the ITIS list in ERM in addition to adherence to the requirements of SAE J2540 as follows.

Precedence: The ERM ASN1 found in the adopted ITE TMDD standard is the definitive authority for ERM message.

Quantities: The ERM requires that quantities used in situation descriptions adopt the standard (usually metric) quantity definitions and units specified by TMDD, NTCIP, SAE and other ITS standards bodies. These values can be converted to other units such as miles, pounds, etc., in the end-user application, if desired. SAE J2540 allows users to send an undefined numerical value followed by a unit phrase, such as "1000" "pounds". This practice is not recommended when a data element (such as the quantities category) exists in the message set. Specifically, implementers SHALL NOT use this ability to add values and units in strings to circumvent the quantities found in a message set.

Sub Set: The ERM message definition provides most, but not all of the phrases found in ITIS. Typically these are data elements which in ERM can be expressed somewhere else in the message itself. The TMDD data element *Event-indicators* (TMDD #xxx) is an example of this. Such phrases are a part of ITIS in order to allow the subject concept to be expressed in those messages which do not have an allocated place for it. The use of ITIS phrases in such an ITE message SHALL be restricted to those elements which the defining ITE standard allows.

Textual Use: The ERM message definition allows free text to be used at any point in the description, along with standards-defined phrases, causes, advice and quantities. However, this text is placed in the data element assigned to hold it and not inserted into other locations.

Language: The language of free text occurring in the ERM message is typically defined in an Interchange Agreement - a working agreement drawn up between message exchange partners. Partners can agree to use English, French, Spanish, or any other language of their choice for routine exchanges. If desired, the language of the free text can also be indicated for a specific message exchange using optional TMDD Data Element #3816 within ERM. Typically, this is used if the normally agreed upon language must be changed in a specific message. Text occurring in the rest of the ERM message is presumed to be of table type #0. This is a reserved type which implies that the text will be formatted in Latin_1 characters and employ no indexing (e.g. simple free text).

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[6] Again, local variants in such definitions can be readily established when needed as per J2540 rules.

<u>Table Types</u>: The ERM message definition presumes that the table entries are static in nature and that entries are never reused. This is reflected in the table header values outlined further in this document.

<u>Local Use</u>: ERM allows the standard ITIS phrases to be varied or translated for local applications, e.g. "traffic stopped" can be expressed as "stationary traffic" or "bouchon" if desired in Nova Scotia or Quebec. Like all users of these phrases, makers of ERM message receiving equipment are free to express these tables in whatever rendering, language, or media formats suit their specific needs. Within this, local additions to the table MAY still be added as required and SHALL occupy ranges between 129 and 250 in the various tables. This will be in accordance with the rules of J2540[7] for local list additions, as well as not violating the specifications of TMDD.

<u>Supporting Messages</u>: Implementers SHOULD also implement the messages of SAE J2540 which support the automatically downloading, updating and translations of table and table entries to users.

Like all users of these phrases, makers of ERM message receiving equipment are free to express these tables in whatever rendering, language, or media formats suit their specific needs.

5.4 Use in the IEEE Incident Management Message Set

The IEEE has developed an ITS message set for use between the dispatch centers of agencies responding to various incidents.[8] This standard makes a very heavy reuse of date elements found in the rest of ITS (including TMDD and SAE lists which were effected by the harmonization of the ITIS lists). The standard has been forced to adopt since being issued (as 1512-2000) to reflect further changes in ITS harmonization. At this time, the Incidment Mamnement standard uses the codes and phrase in the normal way. Some implementation insights are provided below.

In general the adoption of ITIS phrases in 1512-2000 can be classed into two types of use. The first, where formerly free text was used for various descriptions is very must like the changes found in SAE ATIS and other standards. The full feature set of J2540 is employed and a mixture of both free text and index values can be found in the resulting ASN1 element. In the second case, various subsets of the event types where used to clarify and sort the type of event being used. In this instance a subset of ITIS phrases is in general used (while free text is prohibited).

<u>Precedence</u>:   The ASN1 found in the adopted IEEE 1512-2000 and any updated recommendations or standards is the definitive authority for the structure of 1512 messages.

<u>Quantities</u>: Within the message set some specific data elements are provided to hold quantities of information (for example a data element to be used for the number of injured persons). Implementers SHALL NOT use the ability of J2540 to add values and units in strings to circumvent the quantities found in a message set.

<u>Language</u>: Text occurring in the 1512-2000 message is presumed to be of table type #0 if not table type is denoted. This is a reserved type which implies that the text will be formatted in Latin_1 characters and employ no indexing (e.g. simple free text).

<u>Local Use</u>: The 1512-2000 allows the standard ITIS phrases to be varied or translated for local applications, e.g. "traffic stopped" can be expressed as "stationary traffic" if desired. Local additions to the table MAY still be added as

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[7] SAE J2540 provides ways to do this with varying degrees of formality. One can simply pick a new table number and add whatever is wanted in the least "registered" case, while other ranges of use provide for national and regional registry control to occur.

[8] See IEEE Incident Management Working Group: http://grouper.ieee.org/groups/scc32/imwg/

required and SHALL occupy ranges between 129 and 250 in the various tables. This will be in accordance with the rules of J2540[9] for local list additions, as well as not violating the specifications of IEEE 1512-2000.

<u>Supporting Messages</u>: Implementers SHOULD also implement the messages of SAE J2540 which support the automatically downloading, updating and translations of table and table entries to users.

Like all users of these phrases, makers of 1512-2000 message receiving equipment are free to express these tables in whatever rendering, language, or media formats suit their specific needs.

5.5 Use in Operator Consoles

The ITIS phrases (and their predecessor, the RDS phrases) have a history of use in expression building aids and operator prompts in many operator console designs. This document does not specifically address this type of use with any requirements. Some general observations can be given.

If the intended output of the operator data entry is text carried in any sort of ITS message, then consideration should be given to the eventual encoding into tables of the type described here and in J2540. Specifically, if free text is added "inside" such a phrase, then the phrase is no longer identical to that used in the tables. This is fine for some uses, and problematic for others.

In general, implementers should be aware that free text, while offering the widest possible range of expression, is also at times hard to sort and classify by automated means. Some users (this is more the case with ITIS phrases used in ERM systems) will want to parse the codes seen and ignore or take action based on them. Implementers should try to facilitate this, even if their own user base will not be sorting on this.

It is beyond the scope of this document to provide guidance regarding how the various phrases should be best grouped and presented to an operator. Further, this is an area where private vendors are expected to differentiate themselves and their understanding of client needs. There is no "ideal" way to *order* or to *present* the contents of the table. Various automatically adjusting options which change based on the situation (often organized in selectable visual menus) are most commonly found. Other restrictions such as limited display space in a mobile environment, or local operational procedures[10] may effect this as well.

The table below is a recommendation for an example ordering which implementers MAY wish to follow. These group titles and sub-titles attempt to represent the "big picture" categories covered by that portion of the list. The labels are repeated (with commentary as needed) in the actual tables which follow. The labels are NOT code entries themselves, but are simply a visual point of reference for the reader. This was the ordering used during the committee process to consolidate the phrases in the final list.

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[9] SAE J2540 provides ways to do this with varying degrees of formality. One can simply pick a new table number and add whatever is wanted in the least "registered" case, while other ranges of use provide for national and regional registry control to occur.

[10] Some agencies, as a matter of policy, will not issue ITIS phrases with terms containing words like "danger" in them.

High **ATIS phrase category name**
Octet

	Group: Network Conditions
1	Traffic Conditions
2	Accidents & Incidents
3	Closures (Road and Lane)
4	Roadwork
5	Obstructions
6	Delays, Status, And Cancellations
7	Unusual Driving
8	Mobile Situation
9	Device And Equipment Status
10	Restrictions
11	Incident Response Status

	Group: Events Affecting Travel
12	Disasters
13	Disturbances
14	Sporting Events
15	Special Events
16	Parking Information
17	Information System

	Group: Travel Environment
18	Weather Conditions
19	Precipitation
20	Winds
21	Visibility & Air Quality
22	Temperature
23	Pavement Conditions
24	Winter Driving Restrictions & Recommendations
25	Winter Driving Index

Group: Advice	
26	Suggestion Advice
27	Warning Advice
28	Instructions (Recommendations)
29	Instructions (Mandatory)

Group: Qualifiers	
30	Qualifiers
31	Generic Locations
32	Lane / Roadway Descriptions
33	Alternate Route
34	Unit Values

Group: Groups Affected / Involved	
35	Transit Mode
36	Vehicle Groups Affected
37	Traveler Group Affected
38	Responder Group Affected
39	Incident Response Equipment

Table 1 – Suggested Table Organization and Ordering

In addition, there have been four additional new "categories" created since the document was first published. There is no particular organization for these new tables, and different deployment have placed them into different locations. It should be stressed that these categories are optional in nature.

5.6 Formats of tables

The tables are presented as a non-nested set of tables. Common American English textual expressions are used throughout. All strings are made up of "simple text" formatting.

Observe that the type of table entries has been preserved in a grouping which matches that used by portions of TMDD and other ITS message sets. For example, those message phrases dealing with types of disasters are all arranged to be within the range [0x0C01 to 0x0CFF]. These range encodings will be preserved and implementers MAY use them for sorting purposes. If local phrases are to be added, they SHOULD preserve these ranges insofar as possible.

Table nesting has not been used for simplicity. Some saving in memory space can be obtained at the expense of more complex table expansion processing which can be obtained by this method. If implementers wish to create such a nested table for textual reasons, they MAY wish to build it in two stages to preserve the ability to perform range sorting.

5.7 Supported vocabularies and alphabets

The tables are expressed in both ASCII and Modified ASCII character sets. As no diacritical marks are used, there was no need to use the Latin_1 character sets or Unicode.

Example software algorithms to convert into and out of the modified ASCII character set can be found in SAE J2369 Sections 10 & 11.

5.8 Registering a table within ITS

The presented tables are registered as per J2540 as tables for national use, when required.

Implementers wishing to further modify these entries (for example adding a new entry they feel is needed) SHALL follow the procedures outlined in J2540 Section 5.7 & 5.8 and create such a table in the registration range appropriate for their use. It is recommended that such tables nest to the tables presented here rather than duplicate the information in a flat table of their own creation.

6. Data Element Defintions

Messages and data frames specified in Clause 7 and in other standards that use ITIS phrases are composed of message elements. In some cases, these message elements shall be DFs (found in the here or in the other standards). In other cases, these message elements shall be DEs. Any message or data frame specified in Clause 7 shall have all of its DEs and DFs specified in this clause, except those DEs that are primitive ASN.1 data types or those that are adopted from other functional areas, or defined in other volumes of the family of standards. In the later cases, the referenced standards shall be consulted.

The productions of ASN.1 which follows shall be considered normative in nature. While the majority of the normative content is reflected in the actual syntax of the ASN.1 some entries also have additional statements in the ASN.1 comments which shall be considered to be normative as well. In addition, the commentary provided with each entry may also provide additional normative restrictions on the proper use of the entry which shall be followed. The XML productions follow directly from the ASN.1 specifications and the same rules shall be applied.

6.1 Data Element: DE_Accidents and Incidents

Use: The ITIS enumeration list commonly refered to as "Accidents and Incidents," is assigned the upper byte value of [02] (which provides for value ranges from 512 to 767, inclusive). This list is formally called "AccidentsAndIncidents" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 52 different phrases, divided into 6 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 75 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 640).

ASN.1 Representation:

```
AccidentsAndIncidents ::= ENUMERATED  {
    -- Accidents
    accident                              (513),   -- Use when no further data is
                                                   -- available regarding involved vehicle
                                                   -- type

    serious-accident                      (514),
    injury-accident                       (515),
    minor-accident                        (516),
    multi-vehicle-accident                (517),   -- To be used when events are NOT
                                                   -- distributed along a road segment
                                                   -- (i.e. one location)
    numerous-accidents                    (518),   -- To be used when events are
                                                   -- distributed along a road segment
    accident-involving-a-bicycle          (519),
    accident-involving-a-bus              (520),
    accident-involving-a-motorcycle       (521),
    accident-involving-a-pedestrian       (522),
    accident-involving-a-train            (523),
    accident-involving-a-truck            (524),
    accident-involving-a-semi-trailer     (562),   -- NEW:   Added March 2005
    accident-involving-hazardous-materials (525),
    earlier-accident                      (526),   -- Hint: Typically used as a cause, as
                                                   -- with "Due to"
    medical-emergency                     (527),
    secondary-accident                    (528),
    rescue-and-recovery-work-REMOVED      (529),   -- Removed, use Rescue and recovery
                                                   -- work in progress in the Incident
                                                   -- Response Status group when needed
    accident-investigation-work           (530),
    incident                              (531),   -- Hint: For non-accident incidents
                                                   -- (disabled, police pull over, etc.)
                                                   -- where no further information is
                                                   -- available

    -- Disabled, etc.
    stalled-vehicle                       (532),
    abandoned-vehicle                     (533),
    disabled-vehicle                      (534),
    disabled-truck                        (535),
    disabled-semi-trailer                 (536),   -- Alternative Rendering:  disabled
                                                   -- tractor-trailer
    disabled-bus                          (537),
    disabled-train                        (538),
    vehicle-spun-out                      (539),
    vehicle-on-fire                       (540),
    vehicle-in-water                      (541),
    vehicles-slowing-to-look-at-accident  (542),   -- Alternative Rendering:  On-looker
                                                   -- slowdown, Rubbernecking
    -- Jackknifed
    jackknifed-semi-trailer               (543),   -- Alternatives can use: jackknifed
                                                   -- tractor-trailer, jackknifed truck,
                                                   -- jackknifed big-rig
    jackknifed-trailer-home               (544),
    jackknifed-trailer                    (545),   -- Hint: Used for smaller trailers
                                                   -- (i.e. not type "jackknifed semi
                                                   -- trailer" above)

    -- Spills
    spillage-occurring-from-moving-vehicle (546),
    acid-spill                            (547),
    chemical-spill                        (548),
    fuel-spill                            (549),
    hazardous-materials-spill             (550),   -- Also use the Disaster lists for
                                                   -- large HAZMAT events
    oil-spill                             (551),
    spilled-load                          (552),
    toxic-spill                           (553),
    -- Overturned. Stuck
    overturned-vehicle                    (554),   -- Use when no further data is
                                                   -- available regarding involved vehicle
                                                   -- types
```

```
overturned-truck                    (555),
overturned-semi-trailer             (556),
overturned-bus                      (557),
derailed-train                      (558),
stuck-vehicle                       (559),   -- It is preferred to provide data
                                             -- which denotes WHY the vehicle is
                                             -- stuck (i.e. mud/snow, under bridge,
                                             -- too wide, etc.)
truck-stuck-under-bridge            (560),   -- Alternative Rendering:  high load
                                             -- hit involving truck
bus-stuck-under-bridge              (561),   -- Alternative Rendering:  high load
                                             -- hit involving bus
-- Cancel Types
accident-cleared                    (638),
incident-cleared                    (639),
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```xml
<xs:simpleType name="AccidentsAndIncidents" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="512"/>
                <xs:maxInclusive value="767"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="accident" id="_513"/>
                <xs:enumeration value="serious accident" id="_514"/>
                <xs:enumeration value="injury accident" id="_515"/>
                <xs:enumeration value="minor accident" id="_516"/>
                <xs:enumeration value="multi vehicle accident" id="_517"/>
                <xs:enumeration value="numerous accidents" id="_518"/>
                <xs:enumeration value="accident involving a bicycle" id="_519"/>
                <xs:enumeration value="accident involving a bus" id="_520"/>
                <xs:enumeration value="accident involving a motorcycle" id="_521"/>
                <xs:enumeration value="accident involving a pedestrian" id="_522"/>
                <xs:enumeration value="accident involving a train" id="_523"/>
                <xs:enumeration value="accident involving a truck" id="_524"/>
                <xs:enumeration value="accident involving a semi trailer" id="_562"/>
                <xs:enumeration value="accident involving hazardous materials" id="_525"/>
                <xs:enumeration value="earlier accident" id="_526"/>
                <xs:enumeration value="medical emergency" id="_527"/>
                <xs:enumeration value="secondary accident" id="_528"/>
                <xs:enumeration value="rescue and recovery work REMOVED" id="_529"/>
                <xs:enumeration value="accident investigation work" id="_530"/>
                <xs:enumeration value="incident" id="_531"/>
                <xs:enumeration value="stalled vehicle" id="_532"/>
                <xs:enumeration value="abandoned vehicle" id="_533"/>
                <xs:enumeration value="disabled vehicle" id="_534"/>
                <xs:enumeration value="disabled truck" id="_535"/>
                <xs:enumeration value="disabled semi trailer" id="_536"/>
                <xs:enumeration value="disabled bus" id="_537"/>
                <xs:enumeration value="disabled train" id="_538"/>
                <xs:enumeration value="vehicle spun out" id="_539"/>
                <xs:enumeration value="vehicle on fire" id="_540"/>
                <xs:enumeration value="vehicle in water" id="_541"/>
                <xs:enumeration value="vehicles slowing to look at accident" id="_542"/>
                <xs:enumeration value="jackknifed semi trailer" id="_543"/>
                <xs:enumeration value="jackknifed trailer home" id="_544"/>
                <xs:enumeration value="jackknifed trailer" id="_545"/>
                <xs:enumeration value="spillage occurring from moving vehicle" id="_546"/>
                <xs:enumeration value="acid spill" id="_547"/>
                <xs:enumeration value="chemical spill" id="_548"/>
                <xs:enumeration value="fuel spill" id="_549"/>
                <xs:enumeration value="hazardous materials spill" id="_550"/>
                <xs:enumeration value="oil spill" id="_551"/>
                <xs:enumeration value="spilled load" id="_552"/>
                <xs:enumeration value="toxic spill" id="_553"/>
```

```
                <xs:enumeration value="overturned vehicle" id="_554"/>
                <xs:enumeration value="overturned truck" id="_555"/>
                <xs:enumeration value="overturned semi trailer" id="_556"/>
                <xs:enumeration value="overturned bus" id="_557"/>
                <xs:enumeration value="derailed train" id="_558"/>
                <xs:enumeration value="stuck vehicle" id="_559"/>
                <xs:enumeration value="truck stuck under bridge" id="_560"/>
                <xs:enumeration value="bus stuck under bridge" id="_561"/>
                <xs:enumeration value="accident cleared" id="_638"/>
                <xs:enumeration value="incident cleared" id="_639"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:AccidentsAndIncidents" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called <u>DF_ITIS_EventType</u> <u><ASN></u> <u><XML></u>. In addition, this item may be used by data structures in other ITS standards.

6.2 Data Element: DE_Alternate Route

Use: The ITIS enumeration list commonly refered to as "Alternate Route," is assigned the upper byte value of [33] (which provides for value ranges from 8448 to 8703, inclusive). This list is formally called "AlternateRoute" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 17 different phrases. The remaining 110 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 8576).

ASN.1 Representation:
```
AlternateRoute ::= ENUMERATED  {
    detour-where-possible                          (8449),
    no-detour-available                            (8450),
    follow-signs                                   (8451),
    follow-detour-signs                            (8452),
    follow-special-detour-markers                  (8453),
    do-not-follow-detour-signs                     (8454),
    detour-in-operation                            (8455),
    follow-local-detour                            (8456),
    compulsory-detour-in-operation                 (8457),
    no-suitable-detour-available                   (8458),
    detour-is-no-longer-recommended                (8459),
    local-drivers-are-recommended-to-avoid-the-area (8460),
    trucks-are-recommended-to-avoid-the-area       (8461),
    consider-alternate-route                       (8462),
    consider-alternate-parking                     (8463),
    consider-alternate-destination                 (8464),
    consider-alternate-area                        (8465),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="AlternateRoute" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="8448"/>
                <xs:maxInclusive value="8703"/>
            </xs:restriction>
```

```
            </xs:simpleType>
            <xs:simpleType>
               <xs:restriction base="xs:string">
                  <xs:enumeration value="detour where possible" id="_8449"/>
                  <xs:enumeration value="no detour available" id="_8450"/>
                  <xs:enumeration value="follow signs" id="_8451"/>
                  <xs:enumeration value="follow detour signs" id="_8452"/>
                  <xs:enumeration value="follow special detour markers" id="_8453"/>
                  <xs:enumeration value="do not follow detour signs" id="_8454"/>
                  <xs:enumeration value="detour in operation" id="_8455"/>
                  <xs:enumeration value="follow local detour" id="_8456"/>
                  <xs:enumeration value="compulsory detour in operation" id="_8457"/>
                  <xs:enumeration value="no suitable detour available" id="_8458"/>
                  <xs:enumeration value="detour is no longer recommended" id="_8459"/>
                  <xs:enumeration value="local drivers are recommended to avoid the area" id="_8460"/>
                  <xs:enumeration value="trucks are recommended to avoid the area" id="_8461"/>
                  <xs:enumeration value="consider alternate route" id="_8462"/>
                  <xs:enumeration value="consider alternate parking" id="_8463"/>
                  <xs:enumeration value="consider alternate destination" id="_8464"/>
                  <xs:enumeration value="consider alternate area" id="_8465"/>
               </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
               <xs:restriction base="xs:string">
                  <xs:pattern value="\[.+\].*"/>
               </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
               <xs:restriction base="local:AlternateRoute" />
            </xs:simpleType>
         </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.3 Data Element: DE_Asset Status

Use: The ITIS enumeration list commonly refered to as "Asset Status," is assigned the upper byte value of [40] (which provides for value ranges from 10240 to 10495, inclusive). This list is formally called "AssetStatus" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 19 different phrases. The remaining 108 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 10368).

ASN.1 Representation:
```
AssetStatus ::= ENUMERATED {
    unknown-status       (10240),  -- Used when status is not known
    ready-for-use        (10241),
    working-normally     (10242),
    working-autonomously (10243),
    working-incorrectly  (10244),
    not-working          (10245),
    normal-maintenance   (10246),
    in-route-to-use      (10247),
    returning-from-use   (10248),
    out-of-service       (10249),
    off-duty             (10250),
    on-patrol            (10251),
    on-call              (10252),
    on-break             (10253),
    mandatory-time-off   (10254),
    low-on-fuel          (10255),
    low-on-water         (10256),
    low-charge           (10257),
```

```
    missing                  (10258),  -- Use "sign down" in device status if an object is
                                       -- damaged (or use "damaged") and could be returned to
                                       -- service, use "missing" only if an object is in fact
                                       -- missing
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="AssetStatus" >
    <xs:union>
       <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="10240"/>
             <xs:maxInclusive value="10495"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="unknown status" id="_10240"/>
             <xs:enumeration value="ready for use" id="_10241"/>
             <xs:enumeration value="working normally" id="_10242"/>
             <xs:enumeration value="working autonomously" id="_10243"/>
             <xs:enumeration value="working incorrectly" id="_10244"/>
             <xs:enumeration value="not working" id="_10245"/>
             <xs:enumeration value="normal maintenance" id="_10246"/>
             <xs:enumeration value="in route to use" id="_10247"/>
             <xs:enumeration value="returning from use" id="_10248"/>
             <xs:enumeration value="out of service" id="_10249"/>
             <xs:enumeration value="off duty" id="_10250"/>
             <xs:enumeration value="on patrol" id="_10251"/>
             <xs:enumeration value="on call" id="_10252"/>
             <xs:enumeration value="on break" id="_10253"/>
             <xs:enumeration value="mandatory time off" id="_10254"/>
             <xs:enumeration value="low on fuel" id="_10255"/>
             <xs:enumeration value="low on water" id="_10256"/>
             <xs:enumeration value="low charge" id="_10257"/>
             <xs:enumeration value="missing" id="_10258"/>
          </xs:restriction>
       </xs:simpleType >
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="local:AssetStatus" />
       </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.4 Data Element: DE_Closures (Road and Lane)

Use: The ITIS enumeration list commonly refered to as "Closures (Road and Lane)," is assigned the upper byte value of [03] (which provides for value ranges from 768 to 1023, inclusive). This list is formally called "Closures" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 18 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 109 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 896).

ASN.1 Representation:

```
Closures ::= ENUMERATED  {
   closed-to-traffic      (769),
   closed                 (770),  -- Hint: use this only for NON road-lane items (such as
                                  -- a rest stop)
   closed-ahead           (771),
   closed-intermittently  (772),
   closed-for-repairs     (773),
   closed-for-the-season  (774),
   blocked                (775),
   blocked-ahead          (776),
   reduced-to-one-lane    (777),
   reduced-to-two-lanes   (778),
   reduced-to-three-lanes (779),
   collapse               (780),  -- Used with bridges and tunnels
   out                    (781),  -- Used with bridges and roads
   -- Cancel Types
   open-to-traffic        (891),
   open                   (892),  -- Hint: use this only for NON road-lane items (such as
                                  -- a rest stop)
   reopened-to-traffic    (893),
   clearing               (894),
   cleared-from-road      (895),
   ... -- # LOCAL_CONTENT_ITIS
   }
-- Combine with lane-roadway (or generic locations) as needed to form things like
-- "toll lane closed ahead"
```

XML Representation:

```
<xs:simpleType name="Closures" >
    <xs:union>
       <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="768"/>
             <xs:maxInclusive value="1023"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="closed to traffic" id="_769"/>
             <xs:enumeration value="closed" id="_770"/>
             <xs:enumeration value="closed ahead" id="_771"/>
             <xs:enumeration value="closed intermittently" id="_772"/>
             <xs:enumeration value="closed for repairs" id="_773"/>
             <xs:enumeration value="closed for the season" id="_774"/>
             <xs:enumeration value="blocked" id="_775"/>
             <xs:enumeration value="blocked ahead" id="_776"/>
             <xs:enumeration value="reduced to one lane" id="_777"/>
             <xs:enumeration value="reduced to two lanes" id="_778"/>
             <xs:enumeration value="reduced to three lanes" id="_779"/>
             <xs:enumeration value="collapse" id="_780"/>
             <xs:enumeration value="out" id="_781"/>
             <xs:enumeration value="open to traffic" id="_891"/>
             <xs:enumeration value="open" id="_892"/>
             <xs:enumeration value="reopened to traffic" id="_893"/>
             <xs:enumeration value="clearing" id="_894"/>
             <xs:enumeration value="cleared from road" id="_895"/>
          </xs:restriction>
       </xs:simpleType >
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="local:Closures" />
       </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.5 Data Element: DE_Delays, Status, And Cancellations

Use: The ITIS enumeration list commonly refered to as "Delays, Status, And Cancellations," is assigned the upper byte value of [06] (which provides for value ranges from 1536 to 1791, inclusive). This list is formally called "DelayStatusCancellation" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 36 different phrases, divided into 5 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 91 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 1664).

ASN.1 Representation:
```
DelayStatusCancellation ::= ENUMERATED  {
    -- Delays
    delays                         (1537),
    short-delays                   (1538),
    long-delays                    (1539),
    very-long-delays               (1540),
    delays-of-uncertain-duration   (1541),
    delayed-until-further-notice   (1542),
    busy                           (1543),   -- Hint: Combine with generic locations
                                             -- (station busy, etc.)
    very-busy                      (1544),
    crowded                        (1545),
    overcrowded                    (1546),
    -- Cancellations
    cancellations                  (1547),
    route-cancelled-and-no-replacement (1548),
    service-cancelled              (1549),
    service-suspended              (1550),
    service-withdrawn              (1551),
    service-fully-booked           (1552),
    all-services-fully-booked      (1553),
    -- Service Levels
    next-departure                 (1554),   -- Typically followed by a time value
    next-arrival                   (1555),   -- Typically followed by a # value of time
    very-frequent-service          (1556),
    frequent-service               (1557),
    fairly-frequent-service        (1558),
    regular-service                (1559),
    irregular-service              (1560),
    not-operating                  (1561),
    -- Other
    system-busy                    (1562),   -- In this context "system" means the
                                             -- entire network of services over a wide
                                             -- area such as an airline system
    system-very-busy               (1563),
    system-crowded                 (1564),
    system-overcrowded             (1565),
    travel-time                    (1566),   -- Typically followed by a # value of time
    headway                        (1567),   -- Typically followed by a # value of time
    extra-services-in-operation    (1568),
    -- Cancel Types
    delays-clearing                (1660),
    delays-cleared                 (1661),
    normal-services-resumed        (1662),
    operating                      (1663),   -- Use operating for "services" such as
                                             -- bus service
    ... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```
<xs:simpleType name="DelayStatusCancellation" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="1536"/>
                <xs:maxInclusive value="1791"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="delays" id="_1537"/>
                <xs:enumeration value="short delays" id="_1538"/>
                <xs:enumeration value="long delays" id="_1539"/>
                <xs:enumeration value="very long delays" id="_1540"/>
                <xs:enumeration value="delays of uncertain duration" id="_1541"/>
                <xs:enumeration value="delayed until further notice" id="_1542"/>
                <xs:enumeration value="busy" id="_1543"/>
                <xs:enumeration value="very busy" id="_1544"/>
                <xs:enumeration value="crowded" id="_1545"/>
                <xs:enumeration value="overcrowded" id="_1546"/>
                <xs:enumeration value="cancellations" id="_1547"/>
                <xs:enumeration value="route cancelled and no replacement" id="_1548"/>
                <xs:enumeration value="service cancelled" id="_1549"/>
                <xs:enumeration value="service suspended" id="_1550"/>
                <xs:enumeration value="service withdrawn" id="_1551"/>
                <xs:enumeration value="service fully booked" id="_1552"/>
                <xs:enumeration value="all services fully booked" id="_1553"/>
                <xs:enumeration value="next departure" id="_1554"/>
                <xs:enumeration value="next arrival" id="_1555"/>
                <xs:enumeration value="very frequent service" id="_1556"/>
                <xs:enumeration value="frequent service" id="_1557"/>
                <xs:enumeration value="fairly frequent service" id="_1558"/>
                <xs:enumeration value="regular service" id="_1559"/>
                <xs:enumeration value="irregular service" id="_1560"/>
                <xs:enumeration value="not operating" id="_1561"/>
                <xs:enumeration value="system busy" id="_1562"/>
                <xs:enumeration value="system very busy" id="_1563"/>
                <xs:enumeration value="system crowded" id="_1564"/>
                <xs:enumeration value="system overcrowded" id="_1565"/>
                <xs:enumeration value="travel time" id="_1566"/>
                <xs:enumeration value="headway" id="_1567"/>
                <xs:enumeration value="extra services in operation" id="_1568"/>
                <xs:enumeration value="delays clearing" id="_1660"/>
                <xs:enumeration value="delays cleared" id="_1661"/>
                <xs:enumeration value="normal services resumed" id="_1662"/>
                <xs:enumeration value="operating" id="_1663"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:DelayStatusCancellation" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.6 Data Element: DE_Device And Equipment Status

Use: The ITIS enumeration list commonly refered to as "Device And Equipment Status," is assigned the upper byte value of [09] (which provides for value ranges from 2304 to 2559, inclusive). This list is formally called "DeviceStatus" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 41 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 86 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 2432).

ASN.1 Representation:

```
DeviceStatus ::= ENUMERATED  {
    lane-control-signs-not-working              (2305),
    lane-control-signs-working-incorrectly      (2306),
    lane-control-signs-operating                (2307),
    variable-message-signs-not-working          (2308),
    variable-message-signs-working-incorrectly  (2309),
    variable-message-signs-operating            (2310),
    emergency-telephones-not-working            (2311),
    emergency-telephone-number-not-working      (2312),
    traffic-lights-not-working                  (2313),
    traffic-lights-working-incorrectly          (2314),
    ramp-control-signals-not-working            (2315),
    ramp-control-signals-working-incorrectly    (2316),
    temporary-traffic-lights-not-working        (2317),
    temporary-traffic-lights-working-incorrectly (2318),
    traffic-signal-control-computer-not-working (2319),
    traffic-signal-timings-changed              (2320),
    overheight-warning-system-triggered         (2321),
    equipment-failure                           (2322),
    railroad-crossing-equipment-failure         (2323),
    tunnel-ventilation-not-working              (2324),
    power-failure                               (2325),  -- Hint: Use for localized
                                                         -- cases of power loss
    widespread-power-outages                    (2326),  -- Alternative  rendering:
                                                         -- widespread power cuts
    technical-problems                          (2327),
    sign-down                                   (2328),
    lines-in-road-faded                         (2329),
    damaged-light-standard                      (2330),  -- Used for all forms of
                                                         -- pole / support damage
    traffic-signal-stuck-on-flash               (2331),
    guide-rail                                  (2332),  -- Used for barriers as well
    fencing                                     (2333),
    light-standard-hanging-by-wires             (2334),
    call-box                                    (2335),
    signal-cabinet                              (2336),  -- Use for all types of
                                                         -- equipment cabinets
    detector                                    (2337),  -- All forms of vehicle
                                                         -- detectors
    improper-use-of-State-vehicle-or-equipment  (2338),
    bulb-out                                    (2339),
    not-yet-operational                         (2340),  -- When installed but not
                                                         -- yet brought on-line for
                                                         -- use by the system
    not-yet-installed                           (2341),  -- When planned
-- Cancel Types
    electronic-signs-repaired                   (2428),
    emergency-call-facilities-restored          (2429),
    traffic-signals-repaired                    (2430),
    railroad-crossing-equipment-now-working-normally (2431),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```xml
<xs:simpleType name="DeviceStatus" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="2304"/>
                <xs:maxInclusive value="2559"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="lane control signs not working" id="_2305"/>
                <xs:enumeration value="lane control signs working incorrectly" id="_2306"/>
                <xs:enumeration value="lane control signs operating" id="_2307"/>
                <xs:enumeration value="variable message signs not working" id="_2308"/>
                <xs:enumeration value="variable message signs working incorrectly" id="_2309"/>
                <xs:enumeration value="variable message signs operating" id="_2310"/>
                <xs:enumeration value="emergency telephones not working" id="_2311"/>
                <xs:enumeration value="emergency telephone number not working" id="_2312"/>
                <xs:enumeration value="traffic lights not working" id="_2313"/>
                <xs:enumeration value="traffic lights working incorrectly" id="_2314"/>
                <xs:enumeration value="ramp control signals not working" id="_2315"/>
                <xs:enumeration value="ramp control signals working incorrectly" id="_2316"/>
                <xs:enumeration value="temporary traffic lights not working" id="_2317"/>
                <xs:enumeration value="temporary traffic lights working incorrectly" id="_2318"/>
                <xs:enumeration value="traffic signal control computer not working" id="_2319"/>
                <xs:enumeration value="traffic signal timings changed" id="_2320"/>
                <xs:enumeration value="overheight warning system triggered" id="_2321"/>
                <xs:enumeration value="equipment failure" id="_2322"/>
                <xs:enumeration value="railroad crossing equipment failure" id="_2323"/>
                <xs:enumeration value="tunnel ventilation not working" id="_2324"/>
                <xs:enumeration value="power failure" id="_2325"/>
                <xs:enumeration value="widespread power outages" id="_2326"/>
                <xs:enumeration value="technical problems" id="_2327"/>
                <xs:enumeration value="sign down" id="_2328"/>
                <xs:enumeration value="lines in road faded" id="_2329"/>
                <xs:enumeration value="damaged light standard" id="_2330"/>
                <xs:enumeration value="traffic signal stuck on flash" id="_2331"/>
                <xs:enumeration value="guide rail" id="_2332"/>
                <xs:enumeration value="fencing" id="_2333"/>
                <xs:enumeration value="light standard hanging by wires" id="_2334"/>
                <xs:enumeration value="call box" id="_2335"/>
                <xs:enumeration value="signal cabinet" id="_2336"/>
                <xs:enumeration value="detector" id="_2337"/>
                <xs:enumeration value="improper use of State vehicle or equipment" id="_2338"/>
                <xs:enumeration value="bulb out" id="_2339"/>
                <xs:enumeration value="not yet operational" id="_2340"/>
                <xs:enumeration value="not yet installed" id="_2341"/>
                <xs:enumeration value="electronic signs repaired" id="_2428"/>
                <xs:enumeration value="emergency call facilities restored" id="_2429"/>
                <xs:enumeration value="traffic signals repaired" id="_2430"/>
                <xs:enumeration value="railroad crossing equipment now working normally" id="_2431"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:DeviceStatus" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.7 Data Element: DE_Disasters

Use: The ITIS enumeration list commonly refered to as "Disasters," is assigned the upper byte value of [12] (which provides for value ranges from 3072 to 3327, inclusive). This list is formally called "Disasters" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 32 different phrases, divided into 4 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 95 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 3200).

ASN.1 Representation:
```
Disasters ::= ENUMERATED  {
    -- Water Related
    flash-flood                     (3073),
    major-flood                     (3074),
    reservoir-failure               (3075),
    levee-failure                   (3076),
    tsunami                         (3077),
    tidal-wave                      (3078),
    -- Fire Related
    volcanic-eruption               (3079),
    ash-fall                        (3080),
    lava-flow                       (3081),
    serious-fire                    (3082),
    forest-fire                     (3083),
    wildfire                        (3084),
    building-fire                   (3085),
    brush-fire                      (3086),
    grass-fire                      (3087),
    fire-danger-extreme             (3088),
    fire-danger-very-high           (3089),
    fire-danger-high                (3090),
    fire-danger-medium              (3091),
    fire-danger-low                 (3092),
    --  Other
    earthquake-damage               (3093),
    air-crash                       (3094),
    rail-crash                      (3095),
    toxic-release                   (3096),
    toxic-leak                      (3097),
    radioactive-release             (3098),
    radiation-hazard                (3099),
    reactor-leakage                 (3100),
    explosion                       (3101),
    major-hazardous-materials-fire    (3102),   -- Alternative Rendering:  Major HAZMAT
                                                -- fire
    major-hazardous-materials-release (3103),   -- Alternative Rendering:  Major HAZMAT
                                                -- release
    -- Cancel Types
    disaster-cleared                (3199),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="Disasters" >
    <xs:union>
       <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="3072"/>
             <xs:maxInclusive value="3327"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="flash flood" id="_3073"/>
```

```
                <xs:enumeration value="major flood" id="_3074"/>
                <xs:enumeration value="reservoir failure" id="_3075"/>
                <xs:enumeration value="levee failure" id="_3076"/>
                <xs:enumeration value="tsunami" id="_3077"/>
                <xs:enumeration value="tidal wave" id="_3078"/>
                <xs:enumeration value="volcanic eruption" id="_3079"/>
                <xs:enumeration value="ash fall" id="_3080"/>
                <xs:enumeration value="lava flow" id="_3081"/>
                <xs:enumeration value="serious fire" id="_3082"/>
                <xs:enumeration value="forest fire" id="_3083"/>
                <xs:enumeration value="wildfire" id="_3084"/>
                <xs:enumeration value="building fire" id="_3085"/>
                <xs:enumeration value="brush fire" id="_3086"/>
                <xs:enumeration value="grass fire" id="_3087"/>
                <xs:enumeration value="fire danger extreme" id="_3088"/>
                <xs:enumeration value="fire danger very high" id="_3089"/>
                <xs:enumeration value="fire danger high" id="_3090"/>
                <xs:enumeration value="fire danger medium" id="_3091"/>
                <xs:enumeration value="fire danger low" id="_3092"/>
                <xs:enumeration value="earthquake damage" id="_3093"/>
                <xs:enumeration value="air crash" id="_3094"/>
                <xs:enumeration value="rail crash" id="_3095"/>
                <xs:enumeration value="toxic release" id="_3096"/>
                <xs:enumeration value="toxic leak" id="_3097"/>
                <xs:enumeration value="radioactive release" id="_3098"/>
                <xs:enumeration value="radiation hazard" id="_3099"/>
                <xs:enumeration value="reactor leakage" id="_3100"/>
                <xs:enumeration value="explosion" id="_3101"/>
                <xs:enumeration value="major hazardous materials fire" id="_3102"/>
                <xs:enumeration value="major hazardous materials release" id="_3103"/>
                <xs:enumeration value="disaster cleared" id="_3199"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:Disasters" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.8 Data Element: DE_Disturbances

Use: The ITIS enumeration list commonly refered to as "Disturbances," is assigned the upper byte value of [13] (which provides for value ranges from 3328 to 3583, inclusive). This list is formally called "Disturbances" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 37 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 90 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 3456).

ASN.1 Representation:

```
Disturbances ::= ENUMERATED  {
    assault                         (3329),  -- This index is not to be used as a
                                             -- default value for this category
    crime                           (3330),
    robbery                         (3331),
    fare-dispute                    (3332),
    shooting                        (3333),
    gunfire-on-roadway              (3334),
    suicide                         (3335),
    fight                           (3336),  -- Involves a few  persons and is
                                             -- localized (alt: brawl)
    gang-fight                      (3337),  -- Multi-party event occurring which may
                                             -- involve weapons
    person-harassment               (3338),  -- "person" may be rendered as "passenger"
                                             -- if used in a controlled environment
                                             -- such as transit
    person-injured                  (3339),
    sick-customer                   (3363),
    unruly-passenger                (3340),
    person-intoxicated              (3341),
    crowd-control-problem           (3342),
    demonstration                   (3343),
    march                           (3344),
    public-disturbance              (3345),
    riot                            (3346),
    civil-unrest                    (3347),
    civil-emergency                 (3348),
    strike                          (3349),
    public-transit-strike           (3350),  -- Hint: Strike affecting services
    stampede                        (3351),
    teargas-used                    (3352),
    security-alert                  (3353),  -- Heightened security procedures in
                                             -- effect
    security-incident               (3354),
    checkpoint                      (3355),
    bomb-alert                      (3356),
    terrorist-incident              (3357),
    high-velocity-shell-fire        (3358),  -- Hint: Used as a part of avalanche
                                             -- control
    explosives-in-use               (3359),
    air-raid                        (3360),
    weapons-of-mass-destruction-threat (3361),
    military-operations             (3362),  -- (war)
-- Cancel Types
    security-problem-cleared        (3454),
    traffic-disturbance-cleared     (3455),
    ... -- # LOCAL_CONTENT_ITIS
    }
-- Disturbances occurring on or affecting the actual roadway or surrounding areas
```

XML Representation:

```
<xs:simpleType name="Disturbances" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="3328"/>
                <xs:maxInclusive value="3583"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="assault" id="_3329"/>
                <xs:enumeration value="crime" id="_3330"/>
                <xs:enumeration value="robbery" id="_3331"/>
                <xs:enumeration value="fare dispute" id="_3332"/>
                <xs:enumeration value="shooting" id="_3333"/>
                <xs:enumeration value="gunfire on roadway" id="_3334"/>
                <xs:enumeration value="suicide" id="_3335"/>
                <xs:enumeration value="fight" id="_3336"/>
```

```
                <xs:enumeration value="gang fight" id="_3337"/>
                <xs:enumeration value="person harassment" id="_3338"/>
                <xs:enumeration value="person injured" id="_3339"/>
                <xs:enumeration value="sick customer" id="_3363"/>
                <xs:enumeration value="unruly passenger" id="_3340"/>
                <xs:enumeration value="person intoxicated" id="_3341"/>
                <xs:enumeration value="crowd control problem" id="_3342"/>
                <xs:enumeration value="demonstration" id="_3343"/>
                <xs:enumeration value="march" id="_3344"/>
                <xs:enumeration value="public disturbance" id="_3345"/>
                <xs:enumeration value="riot" id="_3346"/>
                <xs:enumeration value="civil unrest" id="_3347"/>
                <xs:enumeration value="civil emergency" id="_3348"/>
                <xs:enumeration value="strike" id="_3349"/>
                <xs:enumeration value="public transit strike" id="_3350"/>
                <xs:enumeration value="stampede" id="_3351"/>
                <xs:enumeration value="teargas used" id="_3352"/>
                <xs:enumeration value="security alert" id="_3353"/>
                <xs:enumeration value="security incident" id="_3354"/>
                <xs:enumeration value="checkpoint" id="_3355"/>
                <xs:enumeration value="bomb alert" id="_3356"/>
                <xs:enumeration value="terrorist incident" id="_3357"/>
                <xs:enumeration value="high velocity shell fire" id="_3358"/>
                <xs:enumeration value="explosives in use" id="_3359"/>
                <xs:enumeration value="air raid" id="_3360"/>
                <xs:enumeration value="weapons of mass destruction threat" id="_3361"/>
                <xs:enumeration value="military operations" id="_3362"/>
                <xs:enumeration value="security problem cleared" id="_3454"/>
                <xs:enumeration value="traffic disturbance cleared" id="_3455"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:Disturbances" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.9 Data Element: DE_Generic Locations

Use: The ITIS enumeration list commonly refered to as "Generic Locations," is assigned the upper byte value of [31] (which provides for value ranges from 7936 to 8191, inclusive). This list is formally called "GenericLocations" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 72 different phrases, divided into 5 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 55 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 8064).

ASN.1 Representation:
```
GenericLocations ::= ENUMERATED  {
    -- Road Related
    on-bridges                 (7937),   -- Not to be used as the default for this
                                         -- category
    in-tunnels                 (7938),
    entering-or-leaving-tunnels (7939),
    on-ramps                   (7940),
    in-road-construction-area  (7941),
    around-a-curve             (7942),
    on-minor-roads             (7943),
    in-the-opposing-lanes      (7944),
    adjacent-to-roadway        (7945),
    on-bend                    (7946),
    entire-intersection        (7947),
    in-the-median              (7948),
    moved-to-side-of-road      (7949),
    moved-to-shoulder          (7950),
    on-the-roadway             (7951),   -- Use generic locations and groups affected to
                                         -- make other such phrases

    -- Terrain & Geography
    in-shaded-areas            (7952),
    in-low-lying-areas         (7953),
    in-the-downtown-area       (7954),
    in-the-inner-city-area     (7955),
    in-parts                   (7956),
    in-some-places             (7957),
    in-the-ditch               (7958),
    in-the-valley              (7959),
    on-hill-top                (7960),
    near-the-foothills         (7961),
    at-high-altitudes          (7962),
    near-the-lake              (7963),
    near-the-shore             (7964),
    nearby-basin               (8008),   -- NEW: Added in March 2005 review
    over-the-crest-of-a-hill   (7965),
    other-than-on-the-roadway  (7966),
    near-the-beach             (7967),
    near-beach-access-point    (7968),
    mountain-pass              (8006),
    lower-level                (7969),
    upper-level                (7970),
    -- Transit Travel, Air Travel and Places
    airport                    (7971),
    concourse                  (7972),
    gate                       (7973),
    baggage-claim              (7974),
    customs-point              (7975),
    reservation-center         (8007),
    station                    (7976),
    platform                   (7977),   -- Alternative Rendering:  track
    dock                       (7978),
    depot                      (7979),
    ev-charging-point          (7980),
    information-welcome-point  (7981),
    at-rest-area               (7982),
    at-service-area            (7983),
    at-weigh-station           (7984),
    picnic-areas               (7985),
    rest-area                  (7986),
    service-stations           (7987),
    toilets                    (7988),
    -- Direction of Travel
    on-the-right               (7989),
    on-the-left                (7990),
    in-the-center              (7991),
    in-the-opposite-direction  (7992),
    cross-traffic              (7993),
    northbound-traffic         (7994),
    eastbound-traffic          (7995),
    southbound-traffic         (7996),
```

```
    westbound-traffic            (7997),
    -- Compass Points
    north                        (7998),
    south                        (7999),
    east                         (8000),
    west                         (8001),
    northeast                    (8002),
    northwest                    (8003),
    southeast                    (8004),
    southwest                    (8005),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```xml
<xs:simpleType name="GenericLocations" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
               <xs:minInclusive value="7936"/>
               <xs:maxInclusive value="8191"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
               <xs:enumeration value="on bridges" id="_7937"/>
               <xs:enumeration value="in tunnels" id="_7938"/>
               <xs:enumeration value="entering or leaving tunnels" id="_7939"/>
               <xs:enumeration value="on ramps" id="_7940"/>
               <xs:enumeration value="in road construction area" id="_7941"/>
               <xs:enumeration value="around a curve" id="_7942"/>
               <xs:enumeration value="on minor roads" id="_7943"/>
               <xs:enumeration value="in the opposing lanes" id="_7944"/>
               <xs:enumeration value="adjacent to roadway" id="_7945"/>
               <xs:enumeration value="on bend" id="_7946"/>
               <xs:enumeration value="entire intersection" id="_7947"/>
               <xs:enumeration value="in the median" id="_7948"/>
               <xs:enumeration value="moved to side of road" id="_7949"/>
               <xs:enumeration value="moved to shoulder" id="_7950"/>
               <xs:enumeration value="on the roadway" id="_7951"/>
               <xs:enumeration value="in shaded areas" id="_7952"/>
               <xs:enumeration value="in low lying areas" id="_7953"/>
               <xs:enumeration value="in the downtown area" id="_7954"/>
               <xs:enumeration value="in the inner city area" id="_7955"/>
               <xs:enumeration value="in parts" id="_7956"/>
               <xs:enumeration value="in some places" id="_7957"/>
               <xs:enumeration value="in the ditch" id="_7958"/>
               <xs:enumeration value="in the valley" id="_7959"/>
               <xs:enumeration value="on hill top" id="_7960"/>
               <xs:enumeration value="near the foothills" id="_7961"/>
               <xs:enumeration value="at high altitudes" id="_7962"/>
               <xs:enumeration value="near the lake" id="_7963"/>
               <xs:enumeration value="near the shore" id="_7964"/>
               <xs:enumeration value="nearby basin" id="_8008"/>
               <xs:enumeration value="over the crest of a hill" id="_7965"/>
               <xs:enumeration value="other than on the roadway" id="_7966"/>
               <xs:enumeration value="near the beach" id="_7967"/>
               <xs:enumeration value="near beach access point" id="_7968"/>
               <xs:enumeration value="mountain pass" id="_8006"/>
               <xs:enumeration value="lower level" id="_7969"/>
               <xs:enumeration value="upper level" id="_7970"/>
               <xs:enumeration value="airport" id="_7971"/>
               <xs:enumeration value="concourse" id="_7972"/>
               <xs:enumeration value="gate" id="_7973"/>
               <xs:enumeration value="baggage claim" id="_7974"/>
               <xs:enumeration value="customs point" id="_7975"/>
               <xs:enumeration value="reservation center" id="_8007"/>
               <xs:enumeration value="station" id="_7976"/>
               <xs:enumeration value="platform" id="_7977"/>
               <xs:enumeration value="dock" id="_7978"/>
               <xs:enumeration value="depot" id="_7979"/>
               <xs:enumeration value="ev charging point" id="_7980"/>
```

```
                <xs:enumeration value="information welcome point" id="_7981"/>
                <xs:enumeration value="at rest area" id="_7982"/>
                <xs:enumeration value="at service area" id="_7983"/>
                <xs:enumeration value="at weigh station" id="_7984"/>
                <xs:enumeration value="picnic areas" id="_7985"/>
                <xs:enumeration value="rest area" id="_7986"/>
                <xs:enumeration value="service stations" id="_7987"/>
                <xs:enumeration value="toilets" id="_7988"/>
                <xs:enumeration value="on the right" id="_7989"/>
                <xs:enumeration value="on the left" id="_7990"/>
                <xs:enumeration value="in the center" id="_7991"/>
                <xs:enumeration value="in the opposite direction" id="_7992"/>
                <xs:enumeration value="cross traffic" id="_7993"/>
                <xs:enumeration value="northbound traffic" id="_7994"/>
                <xs:enumeration value="eastbound traffic" id="_7995"/>
                <xs:enumeration value="southbound traffic" id="_7996"/>
                <xs:enumeration value="westbound traffic" id="_7997"/>
                <xs:enumeration value="north" id="_7998"/>
                <xs:enumeration value="south" id="_7999"/>
                <xs:enumeration value="east" id="_8000"/>
                <xs:enumeration value="west" id="_8001"/>
                <xs:enumeration value="northeast" id="_8002"/>
                <xs:enumeration value="northwest" id="_8003"/>
                <xs:enumeration value="southeast" id="_8004"/>
                <xs:enumeration value="southwest" id="_8005"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:GenericLocations" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.10 Data Element: DE_Incident Response Equipment

Use: The ITIS enumeration list commonly refered to as "Incident Response Equipment," is assigned the upper byte value of [39] (which provides for value ranges from 9984 to 10239, inclusive). This list is formally called "IncidentResponseEquipment" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 72 different phrases. The remaining 55 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 10112).

ASN.1 Representation:
```
IncidentResponseEquipment ::= ENUMERATED  {
   ground-fire-suppression         (9985),
   heavy-ground-equipment          (9986),
   aircraft                        (9988),
   marine-equipment                (9989),
   support-equipment               (9990),
   medical-rescue-unit             (9991),
   other                           (9993),   -- Depreciated by fire standards, do not
                                             -- use
   ground-fire-suppression-other   (9994),
   engine                          (9995),
   truck-or-aerial                 (9996),
   quint                           (9997),   -- A five-function type of fire apparatus.
                                             -- The units in the movie Backdraft were
                                             -- quints
   tanker-pumper-combination       (9998),
```

```
brush-truck                      (10000),
aircraft-rescue-firefighting     (10001),
heavy-ground-equipment-other     (10004),
dozer-or-plow                    (10005),
tractor                          (10006),
tanker-or-tender                 (10008),
aircraft-other                   (10024),
aircraft-fixed-wing-tanker       (10025),
helitanker                       (10026),
helicopter                       (10027),
marine-equipment-other           (10034),
fire-boat-with-pump              (10035),
boat-no-pump                     (10036),
support-apparatus-other          (10044),
breathing-apparatus-support      (10045),
light-and-air-unit               (10046),
medical-rescue-unit-other        (10054),
rescue-unit                      (10055),
urban-search-rescue-unit         (10056),
high-angle-rescue                (10057),
crash-fire-rescue                (10058),
bLS-unit                         (10059),
aLS-unit                         (10060),
mobile-command-post              (10075),  -- Depreciated, do not use
chief-officer-car                (10076),
hAZMAT-unit                      (10077),
type-i-hand-crew                 (10078),
type-ii-hand-crew                (10079),
privately-owned-vehicle          (10083),  -- (Often found in volunteer fire teams)
other-apparatus-resource         (10084),  -- (Remapped from fire code zero)
ambulance                        (10085),
bomb-squad-van                   (10086),
combine-harvester                (10087),
construction-vehicle             (10088),
farm-tractor                     (10089),
grass-cutting-machines           (10090),
hAZMAT-containment-tow           (10091),
heavy-tow                        (10092),
light-tow                        (10094),
flatbed-tow                      (10114),  -- NEW: Added March 2005
hedge-cutting-machines           (10093),
mobile-crane                     (10095),
refuse-collection-vehicle        (10096),
resurfacing-vehicle              (10097),
road-sweeper                     (10098),
roadside-litter-collection-crews (10099),
salvage-vehicle                  (10100),
sand-truck                       (10101),
snowplow                         (10102),
steam-roller                     (10103),
swat-team-van                    (10104),
track-laying-vehicle             (10105),
unknown-vehicle                  (10106),
white-lining-vehicle             (10107),  -- Consider using Roadwork "road marking
                                           -- operations" unless the objective is to
                                           -- refer to the specific vehicle of this
                                           -- type.  Alternative Rendering: line
                                           -- painting vehicle
dump-truck                       (10108),
supervisor-vehicle               (10109),
snow-blower                      (10110),
rotary-snow-blower               (10111),
road-grader                      (10112),  -- Alternative term: motor grader
steam-truck                      (10113),  -- A special truck that thaws culverts and
                                           -- storm drains
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```
<xs:simpleType name="IncidentResponseEquipment" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="9984"/>
                <xs:maxInclusive value="10239"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="ground fire suppression" id="_9985"/>
                <xs:enumeration value="heavy ground equipment" id="_9986"/>
                <xs:enumeration value="aircraft" id="_9988"/>
                <xs:enumeration value="marine equipment" id="_9989"/>
                <xs:enumeration value="support equipment" id="_9990"/>
                <xs:enumeration value="medical rescue unit" id="_9991"/>
                <xs:enumeration value="other" id="_9993"/>
                <xs:enumeration value="ground fire suppression other" id="_9994"/>
                <xs:enumeration value="engine" id="_9995"/>
                <xs:enumeration value="truck or aerial" id="_9996"/>
                <xs:enumeration value="quint" id="_9997"/>
                <xs:enumeration value="tanker pumper combination" id="_9998"/>
                <xs:enumeration value="brush truck" id="_10000"/>
                <xs:enumeration value="aircraft rescue firefighting" id="_10001"/>
                <xs:enumeration value="heavy ground equipment other" id="_10004"/>
                <xs:enumeration value="dozer or plow" id="_10005"/>
                <xs:enumeration value="tractor" id="_10006"/>
                <xs:enumeration value="tanker or tender" id="_10008"/>
                <xs:enumeration value="aircraft other" id="_10024"/>
                <xs:enumeration value="aircraft fixed wing tanker" id="_10025"/>
                <xs:enumeration value="helitanker" id="_10026"/>
                <xs:enumeration value="helicopter" id="_10027"/>
                <xs:enumeration value="marine equipment other" id="_10034"/>
                <xs:enumeration value="fire boat with pump" id="_10035"/>
                <xs:enumeration value="boat no pump" id="_10036"/>
                <xs:enumeration value="support apparatus other" id="_10044"/>
                <xs:enumeration value="breathing apparatus support" id="_10045"/>
                <xs:enumeration value="light and air unit" id="_10046"/>
                <xs:enumeration value="medical rescue unit other" id="_10054"/>
                <xs:enumeration value="rescue unit" id="_10055"/>
                <xs:enumeration value="urban search rescue unit" id="_10056"/>
                <xs:enumeration value="high angle rescue" id="_10057"/>
                <xs:enumeration value="crash fire rescue" id="_10058"/>
                <xs:enumeration value="bLS unit" id="_10059"/>
                <xs:enumeration value="aLS unit" id="_10060"/>
                <xs:enumeration value="mobile command post" id="_10075"/>
                <xs:enumeration value="chief officer car" id="_10076"/>
                <xs:enumeration value="hAZMAT unit" id="_10077"/>
                <xs:enumeration value="type i hand crew" id="_10078"/>
                <xs:enumeration value="type ii hand crew" id="_10079"/>
                <xs:enumeration value="privately owned vehicle" id="_10083"/>
                <xs:enumeration value="other apparatus resource" id="_10084"/>
                <xs:enumeration value="ambulance" id="_10085"/>
                <xs:enumeration value="bomb squad van" id="_10086"/>
                <xs:enumeration value="combine harvester" id="_10087"/>
                <xs:enumeration value="construction vehicle" id="_10088"/>
                <xs:enumeration value="farm tractor" id="_10089"/>
                <xs:enumeration value="grass cutting machines" id="_10090"/>
                <xs:enumeration value="hAZMAT containment tow" id="_10091"/>
                <xs:enumeration value="heavy tow" id="_10092"/>
                <xs:enumeration value="light tow" id="_10094"/>
                <xs:enumeration value="flatbed tow" id="_10114"/>
                <xs:enumeration value="hedge cutting machines" id="_10093"/>
                <xs:enumeration value="mobile crane" id="_10095"/>
                <xs:enumeration value="refuse collection vehicle" id="_10096"/>
                <xs:enumeration value="resurfacing vehicle" id="_10097"/>
                <xs:enumeration value="road sweeper" id="_10098"/>
                <xs:enumeration value="roadside litter collection crews" id="_10099"/>
                <xs:enumeration value="salvage vehicle" id="_10100"/>
                <xs:enumeration value="sand truck" id="_10101"/>
```

```
                        <xs:enumeration value="snowplow" id="_10102"/>
                        <xs:enumeration value="steam roller" id="_10103"/>
                        <xs:enumeration value="swat team van" id="_10104"/>
                        <xs:enumeration value="track laying vehicle" id="_10105"/>
                        <xs:enumeration value="unknown vehicle" id="_10106"/>
                        <xs:enumeration value="white lining vehicle" id="_10107"/>
                        <xs:enumeration value="dump truck" id="_10108"/>
                        <xs:enumeration value="supervisor vehicle" id="_10109"/>
                        <xs:enumeration value="snow blower" id="_10110"/>
                        <xs:enumeration value="rotary snow blower" id="_10111"/>
                        <xs:enumeration value="road grader" id="_10112"/>
                        <xs:enumeration value="steam truck" id="_10113"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:IncidentResponseEquipment" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.11 Data Element: DE_Incident Response Status

Use: The ITIS enumeration list commonly refered to as "Incident Response Status," is assigned the upper byte value of [11] (which provides for value ranges from 2816 to 3071, inclusive). This list is formally called "IncidentResponseStatus" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 17 different phrases. The remaining 110 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 2944).

ASN.1 Representation:
```
IncidentResponseStatus ::= ENUMERATED {
    unconfirmed-report                  (2817),
    initial-response-en-route           (2818),
    follow-up-response-en-route         (2819),
    initial-response-on-scene           (2820),
    follow-up-response-on-scene         (2821),
    confirmed-report                    (2822),
    scene-is-unsecured-at-this-time     (2823),   -- Caution: This has different meanings
                                                  -- in Public Safety use
    response-scene-secured              (2824),   -- Caution: This has different meanings
                                                  -- in Public Safety use
    rescue-and-recovery-work-in-progress (2825),
    extraction-in-progress              (2826),
    clearance-work-in-progress          (2827),
    body-removal-operations             (2828),
    fire-containment-contained          (2829),
    fire-containment-not-contained      (2830),
    event-cleared                       (2831),   -- Meaning that responder has left
                                                  -- scene, not that surrounding traffic
                                                  -- has cleared to a normal level
    traffic-clearing                    (2832),
    incident-closed                     (2833),   -- A "case closed" meaning which can
                                                  -- differ considerably by local agency
                                                  -- policies
    ... -- # LOCAL_CONTENT_ITIS
    }
-- Primarily this list is used for exchanging response status with other agencies.
-- Some of these phrases should be avoided in ITIS targeted for consumer use
```

XML Representation:
```
<xs:simpleType name="IncidentResponseStatus" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="2816"/>
                <xs:maxInclusive value="3071"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="unconfirmed report" id="_2817"/>
                <xs:enumeration value="initial response en route" id="_2818"/>
                <xs:enumeration value="follow up response en route" id="_2819"/>
                <xs:enumeration value="initial response on scene" id="_2820"/>
                <xs:enumeration value="follow up response on scene" id="_2821"/>
                <xs:enumeration value="confirmed report" id="_2822"/>
                <xs:enumeration value="scene is unsecured at this time" id="_2823"/>
                <xs:enumeration value="response scene secured" id="_2824"/>
                <xs:enumeration value="rescue and recovery work in progress" id="_2825"/>
                <xs:enumeration value="extraction in progress" id="_2826"/>
                <xs:enumeration value="clearance work in progress" id="_2827"/>
                <xs:enumeration value="body removal operations" id="_2828"/>
                <xs:enumeration value="fire containment contained" id="_2829"/>
                <xs:enumeration value="fire containment not contained" id="_2830"/>
                <xs:enumeration value="event cleared" id="_2831"/>
                <xs:enumeration value="traffic clearing" id="_2832"/>
                <xs:enumeration value="incident closed" id="_2833"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:IncidentResponseStatus" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.12 Data Element: DE_Information System

Use: The ITIS enumeration list commonly refered to as "Information System," is assigned the upper byte value of [17] (which provides for value ranges from 4352 to 4607, inclusive). This list is formally called "SystemInformation" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 10 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 117 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 4480).

ASN.1 Representation:
```
SystemInformation ::= ENUMERATED  {
    information-available-on-radio       (4353),  -- Not to be used as a default for
                                                  -- this category
    information-available-on-TV          (4354),
    call-to-get-information              (4355),
    information-available-via-Internet   (4356),
    test-message                         (4357),  -- Not to be displayed on consumer
                                                  -- devices if possible
    no-information-available             (4358),  -- Typically combined with "on xxx
```

```
                                                     -- service" where xxx is a type of
                                                     -- service (bus, rail, etc.)
    null-description                     (4359),     -- (but with event location or other
                                                     -- information provided in the
                                                     -- message)
    information-service-is-being-suspended (4360),
    -- Cancel Types
    information-service-resumed          (4478),
    message-canceled                     (4479),     -- Not Recommended for use
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="SystemInformation" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="4352"/>
              <xs:maxInclusive value="4607"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="information available on radio" id="_4353"/>
              <xs:enumeration value="information available on TV" id="_4354"/>
              <xs:enumeration value="call to get information" id="_4355"/>
              <xs:enumeration value="information available via internet" id="_4356"/>
              <xs:enumeration value="test message" id="_4357"/>
              <xs:enumeration value="no information available" id="_4358"/>
              <xs:enumeration value="null description" id="_4359"/>
              <xs:enumeration value="information service is being suspended" id="_4360"/>
              <xs:enumeration value="information service resumed" id="_4478"/>
              <xs:enumeration value="message canceled" id="_4479"/>
           </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="local:SystemInformation" />
        </xs:simpleType>
     </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.13 Data Element: DE_Instructions (Mandatory)

Use: The ITIS enumeration list commonly refered to as "Instructions (Mandatory)," is assigned the upper byte value of [29] (which provides for value ranges from 7424 to 7679, inclusive). This list is formally called "AdviceInstructionsMandatory" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 26 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 101 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 7552).

ASN.1 Representation:
```
AdviceInstructionsMandatory ::= ENUMERATED  {
    keep-to-the-right                 (7425),
    keep-to-the-left                  (7426),
    use-right-lane                    (7427),
    use-left-lane                     (7428),
    heavy-vehicles-use-right-lane     (7429),
    heavy-vehicles-use-left-lane      (7430),
    observe-signals                   (7431),
    observe-signs                     (7432),
    no-passing                        (7433),
    no-smoking                        (7434),
    no-open-flames                    (7435),
    use-shoulder-as-lane              (7436),
    do-not-drive-on-the-shoulder      (7437),
    allow-emergency-vehicles-to-pass  (7438),
    clear-a-lane-for-emergency-vehicles (7439),
    pull-over-to-the-edge-of-the-roadway (7440),
    wait-for-escort-vehicle           (7441),
    in-emergency-wait-for-police-patrol (7442),
    reduce-your-speed                 (7443),
    observe-speed-limits              (7444),
    check-point                       (7445),
    entry-requirements                (7446),
    insurance-requirements            (7447),
    firearms-requirements             (7448),
    pet-requirements                  (7449),
    -- Cancel Types
    shoulder-travel-no-longer-allowed (7547),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="AdviceInstructionsMandatory" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="7424"/>
              <xs:maxInclusive value="7679"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="keep to the right" id="_7425"/>
              <xs:enumeration value="keep to the left" id="_7426"/>
              <xs:enumeration value="use right lane" id="_7427"/>
              <xs:enumeration value="use left lane" id="_7428"/>
              <xs:enumeration value="heavy vehicles use right lane" id="_7429"/>
              <xs:enumeration value="heavy vehicles use left lane" id="_7430"/>
              <xs:enumeration value="observe signals" id="_7431"/>
              <xs:enumeration value="observe signs" id="_7432"/>
              <xs:enumeration value="no passing" id="_7433"/>
              <xs:enumeration value="no smoking" id="_7434"/>
              <xs:enumeration value="no open flames" id="_7435"/>
              <xs:enumeration value="use shoulder as lane" id="_7436"/>
              <xs:enumeration value="do not drive on the shoulder" id="_7437"/>
              <xs:enumeration value="allow emergency vehicles to pass" id="_7438"/>
              <xs:enumeration value="clear a lane for emergency vehicles" id="_7439"/>
              <xs:enumeration value="pull over to the edge of the roadway" id="_7440"/>
              <xs:enumeration value="wait for escort vehicle" id="_7441"/>
              <xs:enumeration value="in emergency wait for police patrol" id="_7442"/>
              <xs:enumeration value="reduce your speed" id="_7443"/>
              <xs:enumeration value="observe speed limits" id="_7444"/>
              <xs:enumeration value="check point" id="_7445"/>
              <xs:enumeration value="entry requirements" id="_7446"/>
              <xs:enumeration value="insurance requirements" id="_7447"/>
              <xs:enumeration value="firearms requirements" id="_7448"/>
              <xs:enumeration value="pet requirements" id="_7449"/>
              <xs:enumeration value="shoulder travel no longer allowed" id="_7547"/>
           </xs:restriction>
```

```
                  </xs:simpleType >
                  <xs:simpleType>
                     <xs:restriction base="xs:string">
                        <xs:pattern value="\[.+\].*"/>
                     </xs:restriction>
                  </xs:simpleType>
                  <xs:simpleType>
                     <xs:restriction base="local:AdviceInstructionsMandatory" />
                  </xs:simpleType>
            </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.14 Data Element: DE_Instructions (Recommendations)

Use: The ITIS enumeration list commonly refered to as "Instructions (Recommendations)," is assigned the upper byte value of [28] (which provides for value ranges from 7168 to 7423, inclusive). This list is formally called "AdviceInstructionsRecommendations" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 28 different phrases. The remaining 99 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 7296).

ASN.1 Representation:
```
AdviceInstructionsRecommendations ::= ENUMERATED  {
    drive-carefully                                        (7169),
    drive-with-extreme-caution                             (7170),
    approach-with-care                                     (7171),
    keep-your-distance                                     (7172),
    increase-normal-following-distance                     (7173),
    test-your-brakes                                       (7174),
    cross-intersection-with-care                           (7175),
    pass-with-care                                         (7176),
    use-low-beam-headlights                                (7177),
    use-fog-lights                                         (7178),
    use-hazard-warning-lights                              (7179),   -- Alternative
                                                                     -- Rendering:
                                                                     -- use blinkers

    do-not-leave-your-vehicle                              (7180),
    leave-your-vehicle-and-proceed-to-next-safe-place      (7181),
    turn-off-engine                                        (7182),   -- Alternative
                                                                     -- Rendering:
                                                                     -- switch off
                                                                     -- engine

    close-all-windows-turn-off-heater-air-conditioner-and-vents (7183),
    turn-off-air-conditioner-to-prevent-engine-overheating (7184),
    turn-off-mobile-phones-and-two-way-radios              (7185),   -- Alternative
                                                                     -- Rendering:
                                                                     -- switch off
                                                                     -- mobile phones
                                                                     -- and two way
                                                                     -- radios
    prepare-to-stop                                        (7186),
    stop-at-next-rest-area                                 (7187),
    stop-at-next-safe-place                                (7188),
    only-travel-if-absolutely-necessary                    (7189),
    drive-to-another-service-area                          (7190),
    use-through-traffic-lanes                              (7191),
    use-local-traffic-lanes                                (7192),
    use-left-hand-parallel-roadway                         (7193),
    use-right-hand-parallel-roadway                        (7194),
    use-heavy-vehicle-lane                                 (7195),   -- Alternative
                                                                     -- Rendering:
                                                                     -- use truck
```

```
                                                                  -- lanes
    observe-recommended-speed                        (7196),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="AdviceInstructionsRecommendations" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="7168"/>
              <xs:maxInclusive value="7423"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="drive carefully" id="_7169"/>
              <xs:enumeration value="drive with extreme caution" id="_7170"/>
              <xs:enumeration value="approach with care" id="_7171"/>
              <xs:enumeration value="keep your distance" id="_7172"/>
              <xs:enumeration value="increase normal following distance" id="_7173"/>
              <xs:enumeration value="test your brakes" id="_7174"/>
              <xs:enumeration value="cross intersection with care" id="_7175"/>
              <xs:enumeration value="pass with care" id="_7176"/>
              <xs:enumeration value="use low beam headlights" id="_7177"/>
              <xs:enumeration value="use fog lights" id="_7178"/>
              <xs:enumeration value="use hazard warning lights" id="_7179"/>
              <xs:enumeration value="do not leave your vehicle" id="_7180"/>
              <xs:enumeration value="leave your vehicle and proceed to next safe place" id="_7181"/>
              <xs:enumeration value="turn off engine" id="_7182"/>
              <xs:enumeration value="close all windows turn off heater air conditioner and vents"
id="_7183"/>
              <xs:enumeration value="turn off air conditioner to prevent engine overheating"
id="_7184"/>
              <xs:enumeration value="turn off mobile phones and two way radios" id="_7185"/>
              <xs:enumeration value="prepare to stop" id="_7186"/>
              <xs:enumeration value="stop at next rest area" id="_7187"/>
              <xs:enumeration value="stop at next safe place" id="_7188"/>
              <xs:enumeration value="only travel if absolutely necessary" id="_7189"/>
              <xs:enumeration value="drive to another service area" id="_7190"/>
              <xs:enumeration value="use through traffic lanes" id="_7191"/>
              <xs:enumeration value="use local traffic lanes" id="_7192"/>
              <xs:enumeration value="use left hand parallel roadway" id="_7193"/>
              <xs:enumeration value="use right hand parallel roadway" id="_7194"/>
              <xs:enumeration value="use heavy vehicle lane" id="_7195"/>
              <xs:enumeration value="observe recommended speed" id="_7196"/>
           </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="local:AdviceInstructionsRecommendations" />
        </xs:simpleType>
     </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.15 Data Element: DE_ITIS_Text

Use: Simple text used with ITIS codes.

ASN.1 Representation:
```
ITIStext ::= IA5String (SIZE(1..100))
```

XML Representation:
```
<xs:simpleType name="ITIStext" >
    <xs:restriction base="xs:string">
        <xs:minLength value="1"/>
        <xs:maxLength value="100"/>
    </xs:restriction>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS-Codes_And_Text <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.16 Data Element: DE_ITISgroups

Use: The range of ITIS codes dealing with the division of ITIS groups defined in the entire ITIS collection. This data element can be used to clarify what group a phrase or event belongs to. The enumeration value represents the upper byte of the two-byte value assigned to each group (category) of phrases.

ASN.1 Representation:
```
ITISgroups ::= ENUMERATED {
    trafficConditions                   (1),
    accidentsAndIncidents               (2),
    closures                            (3),
    roadwork                            (4),
    obstruction                         (5),
    delayStatusCancellation             (6),
    unusualDriving                      (7),
    mobileSituation                     (8),
    deviceStatus                        (9),
    restrictionClass                    (10),
    incidentResponseStatus              (11),
    disasters                           (12),
    disturbances                        (13),
    sportingEvents                      (14),
    specialEvents                       (15),
    parkingInformation                  (16),
    systemInformation                   (17),
    weatherConditions                   (18),
    precipitation                       (19),
    winds                               (20),
    visibilityAndAirQuality             (21),
    temperature                         (22),
    pavementConditions                  (23),
    winterDrivingRestrictions           (24),
    winterDrivingIndex                  (25),
    suggestionAdvice                    (26),
    warningAdvice                       (27),
    adviceInstructionsRecommendations   (28),
    adviceInstructionsMandatory         (29),
    qualifiers                          (30),
    genericLocations                    (31),
    laneRoadway                         (32),
    alternateRoute                      (33),
    units                               (34),
    transitMode                         (35),
    vehicleGroupAffected                (36),
    travelerGroupAffected               (37),
    responderGroupAffected              (38),
    incidentResponseEquipment           (39),
    assetStatus                         (40),
    roadsideAssets                      (41),
```

```
    transitOperations            (42),
    objects                      (43),
    ...
    }
```

XML Representation:

```
<xs:simpleType name="ITISgroups" >
    <xs:annotation>
        <xs:appinfo>
            trafficConditions (1)
            accidentsAndIncidents (2)
            closures (3)
            roadwork (4)
            obstruction (5)
            delayStatusCancellation (6)
            unusualDriving (7)
            mobileSituation (8)
            deviceStatus (9)
            restrictionClass (10)
            incidentResponseStatus (11)
            disasters (12)
            disturbances (13)
            sportingEvents (14)
            specialEvents (15)
            parkingInformation (16)
            systemInformation (17)
            weatherConditions (18)
            precipitation (19)
            winds (20)
            visibilityAndAirQuality (21)
            temperature (22)
            pavementConditions (23)
            winterDrivingRestrictions (24)
            winterDrivingIndex (25)
            suggestionAdvice (26)
            warningAdvice (27)
            adviceInstructionsRecommendations (28)
            adviceInstructionsMandatory (29)
            qualifiers (30)
            genericLocations (31)
            laneRoadway (32)
            alternateRoute (33)
            units (34)
            transitMode (35)
            vehicleGroupAffected (36)
            travelerGroupAffected (37)
            responderGroupAffected (38)
            incidentResponseEquipment (39)
            assetStatus (40)
            roadsideAssets (41)
            transitOperations (42)
            objects (43)
        </xs:appinfo>
    </xs:annotation>
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="1"/>
                <xs:maxInclusive value="43"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="trafficConditions"/>
                <xs:enumeration value="accidentsAndIncidents"/>
                <xs:enumeration value="closures"/>
                <xs:enumeration value="roadwork"/>
                <xs:enumeration value="obstruction"/>
                <xs:enumeration value="delayStatusCancellation"/>
                <xs:enumeration value="unusualDriving"/>
                <xs:enumeration value="mobileSituation"/>
                <xs:enumeration value="deviceStatus"/>
```

```
                <xs:enumeration value="restrictionClass"/>
                <xs:enumeration value="incidentResponseStatus"/>
                <xs:enumeration value="disasters"/>
                <xs:enumeration value="disturbances"/>
                <xs:enumeration value="sportingEvents"/>
                <xs:enumeration value="specialEvents"/>
                <xs:enumeration value="parkingInformation"/>
                <xs:enumeration value="systemInformation"/>
                <xs:enumeration value="weatherConditions"/>
                <xs:enumeration value="precipitation"/>
                <xs:enumeration value="winds"/>
                <xs:enumeration value="visibilityAndAirQuality"/>
                <xs:enumeration value="temperature"/>
                <xs:enumeration value="pavementConditions"/>
                <xs:enumeration value="winterDrivingRestrictions"/>
                <xs:enumeration value="winterDrivingIndex"/>
                <xs:enumeration value="suggestionAdvice"/>
                <xs:enumeration value="warningAdvice"/>
                <xs:enumeration value="adviceInstructionsRecommendations"/>
                <xs:enumeration value="adviceInstructionsMandatory"/>
                <xs:enumeration value="qualifiers"/>
                <xs:enumeration value="genericLocations"/>
                <xs:enumeration value="laneRoadway"/>
                <xs:enumeration value="alternateRoute"/>
                <xs:enumeration value="units"/>
                <xs:enumeration value="transitMode"/>
                <xs:enumeration value="vehicleGroupAffected"/>
                <xs:enumeration value="travelerGroupAffected"/>
                <xs:enumeration value="responderGroupAffected"/>
                <xs:enumeration value="incidentResponseEquipment"/>
                <xs:enumeration value="assetStatus"/>
                <xs:enumeration value="roadsideAssets"/>
                <xs:enumeration value="transitOperations"/>
                <xs:enumeration value="objects"/>
            </xs:restriction>
        </xs:simpleType >
    </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.17 Data Element: DE_ITIS

Use: The complete ITIS enumeration list commonly refered to as "ITIS," which contains the entire list of codes. This list is formally called "ITIScodes" in the ASN.1 and XML productions. This list contains a total of 1348 different phrases, divided into 117 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). Additional local phrases may be added to this list in each upper byte value starting with the lower byte value of 128 and proceeding upward from there. In other words, the first value assigned for any local additions to this list would be given the value 128 plus 256 times its upper byte value.

ASN.1 Representation:
```
ITIScodes ::= ENUMERATED  {
    -- Traffic Conditions
    stopped-traffic                          (257),
    stop-and-go-traffic                      (258),
    slow-traffic                             (259),
    heavy-traffic                            (260),
    traffic-building                         (261),
    long-queues                              (262),
    traffic-congestion                       (263),
    traffic-lighter-than-normal              (264),
    traffic-heavier-than-normal              (265),
    traffic-much-heavier-than-normal         (266),
    current-speed                            (267),   -- NEW: Added May 2005  Typically
                                                      -- followed by a value entry and
                                                      -- a units entry (MPH/KPH)
    speed-limit                              (268),   -- NEW: Added May 2005  Typically
```

```
                                                 -- followed by a value entry and
                                                 -- a units entry (MPH/KPH)
    travel-time                         (269),   -- NEW: Added May 2005   Typically
                                                 -- followed by a value entry and
                                                 -- a units entry (seconds)
    -- Cancel Types
    traffic-flowing-freely              (379),
    traffic-easing                      (380),   -- Alternative rendering: traffic
                                                 -- clearing
    traffic-returned-to-normal          (381),
    no-problems-to-report               (382),
    traffic-congestion-cleared          (383),
    -- Accidents and Incidents
    -- Accidents
    accident                            (513),   -- Use when no further data is
                                                 -- available regarding involved
                                                 -- vehicle type
    serious-accident                    (514),
    injury-accident                     (515),
    minor-accident                      (516),
    multi-vehicle-accident              (517),   -- To be used when events are NOT
                                                 -- distributed along a road
                                                 -- segment (i.e. one location)
    numerous-accidents                  (518),   -- To be used when events are
                                                 -- distributed along a road
                                                 -- segment
    accident-involving-a-bicycle        (519),
    accident-involving-a-bus            (520),
    accident-involving-a-motorcycle     (521),
    accident-involving-a-pedestrian     (522),
    accident-involving-a-train          (523),
    accident-involving-a-truck          (524),
    accident-involving-a-semi-trailer   (562),   -- NEW:   Added March 2005
    accident-involving-hazardous-materials (525),
    earlier-accident                    (526),   -- Hint: Typically used as a
                                                 -- cause, as with "Due to"
    medical-emergency                   (527),
    secondary-accident                  (528),
    rescue-and-recovery-work-REMOVED    (529),   -- Removed, use Rescue and
                                                 -- recovery work in progress in
                                                 -- the Incident Response Status
                                                 -- group when needed
    accident-investigation-work         (530),
    incident                            (531),   -- Hint: For non-accident
                                                 -- incidents (disabled, police
                                                 -- pull over, etc.) where no
                                                 -- further information is
                                                 -- available
    -- Disabled, etc.
    stalled-vehicle                     (532),
    abandoned-vehicle                   (533),
    disabled-vehicle                    (534),
    disabled-truck                      (535),
    disabled-semi-trailer               (536),   -- Alternative Rendering:
                                                 -- disabled tractor-trailer
    disabled-bus                        (537),
    disabled-train                      (538),
    vehicle-spun-out                    (539),
    vehicle-on-fire                     (540),
    vehicle-in-water                    (541),
    vehicles-slowing-to-look-at-accident (542),  -- Alternative Rendering:
                                                 -- On-looker slowdown,
                                                 -- Rubbernecking
    -- Jackknifed
    jackknifed-semi-trailer             (543),   -- Alternatives can use:
                                                 -- jackknifed tractor-trailer,
                                                 -- jackknifed truck, jackknifed
                                                 -- big-rig
    jackknifed-trailer-home             (544),
    jackknifed-trailer                  (545),   -- Hint: Used for smaller
                                                 -- trailers (i.e. not type
                                                 -- "jackknifed semi trailer"
```

```
                                              -- above)
   -- Spills
spillage-occurring-from-moving-vehicle    (546),
acid-spill                                (547),
chemical-spill                            (548),
fuel-spill                                (549),
hazardous-materials-spill                 (550),    -- Also use the Disaster lists
                                                    -- for large HAZMAT events

oil-spill                                 (551),
spilled-load                              (552),
toxic-spill                               (553),
   -- Overturned. Stuck
overturned-vehicle                        (554),    -- Use when no further data is
                                                    -- available regarding involved
                                                    -- vehicle types

overturned-truck                          (555),
overturned-semi-trailer                   (556),
overturned-bus                            (557),
derailed-train                            (558),
stuck-vehicle                             (559),    -- It is preferred to provide
                                                    -- data which denotes WHY the
                                                    -- vehicle is stuck (i.e.
                                                    -- mud/snow, under bridge, too
                                                    -- wide, etc.)
truck-stuck-under-bridge                  (560),    -- Alternative Rendering:  high
                                                    -- load hit involving truck
bus-stuck-under-bridge                    (561),    -- Alternative Rendering:  high
                                                    -- load hit involving bus
   -- Cancel Types
accident-cleared                          (638),
incident-cleared                          (639),
   -- Closures (Road and Lane)
closed-to-traffic                         (769),
closed                                    (770),    -- Hint: use this only for NON
                                                    -- road-lane items (such as a
                                                    -- rest stop)

closed-ahead                              (771),
closed-intermittently                     (772),
closed-for-repairs                        (773),
closed-for-the-season                     (774),
blocked                                   (775),
blocked-ahead                             (776),
reduced-to-one-lane                       (777),
reduced-to-two-lanes                      (778),
reduced-to-three-lanes                    (779),
collapse                                  (780),    -- Used with bridges and tunnels
out                                       (781),    -- Used with bridges and roads
   -- Cancel Types
open-to-traffic                           (891),
open                                      (892),    -- Hint: use this only for NON
                                                    -- road-lane items (such as a
                                                    -- rest stop)
reopened-to-traffic                       (893),
clearing                                  (894),
cleared-from-road                         (895),
   -- Roadwork
   -- Roads
road-construction                         (1025),
major-road-construction                   (1026),
long-term-road-construction               (1027),
construction-work                         (1028),
paving-operations                         (1029),
work-in-the-median                        (1030),
road-reconstruction                       (1031),
opposing-traffic                          (1032),
narrow-lanes                              (1033),
construction-traffic-merging              (1034),
single-line-traffic-alternating-directions (1035),
road-maintenance-operations               (1036),
road-marking-operations                   (1037),
road-widening                             (1061),
cracks                                    (1052),   -- Used for disjoint roadway
```

```
                                                        -- surface
        crack-REMOVE                        (1058),     -- No Longer Used. Used for
                                                        -- disjoint roadway surface
        bumps                               (1053),     -- Used for swelling
        drop-off                            (1059),
        storm-drain                         (1054),
-- Bridges
        bridge-maintenance-operations       (1038),
        bridge-construction                 (1039),
        bridge-demolition-work              (1040),
        seismic-retrofit                    (1060),     -- All types of earthquake
                                                        -- construction

-- Other
        overgrown-grass                     (1055),
        overgrown-brushshrubs               (1056),
        overgrown-trees                     (1057),
        blasting                            (1041),     -- See also: avalanche
        avalanche-control-activities        (1042),
        water-main-work                     (1043),
        gas-main-work                       (1044),
        work-on-underground-cables          (1045),
        work-on-underground-services        (1046),
        new-road-construction-layout        (1047),
        new-road-layout                     (1048),
        temporary-lane-markings             (1049),
        temporary-traffic-lights            (1050),
        emergency-maintenance               (1051),
-- Cancel Types
        road-maintenance-cleared            (1146),
        normal-road-layout-restored         (1147),
        road-work-clearance-in-progress     (1148),
        road-construction-cleared           (1149),
        normal-traffic-lanes-restored       (1150),
        road-work-cleared                   (1151),
-- Obstructions
-- General
        obstruction-on-roadway              (1281),
        object-on-roadway                   (1282),
        objects-falling-from-moving-vehicle (1283),
        debris-on-roadway                   (1284),
        storm-damage                        (1285),
-- People
        people-on-roadway                   (1286),
        bicyclists-on-roadway               (1287),
        sightseers-obstructing-access       (1288),
        large-numbers-of-visitors           (1289),
-- Animals
        animal-on-roadway                   (1290),
        large-animal-on-roadway             (1291),
        herd-of-animals-on-roadway          (1292),
        animal-struck                       (1293),
-- Specific Items
        advertising-signs                   (1315),     -- Used for illegal signage as
                                                        -- well
        fallen-trees                        (1294),
        over-turned-trees                   (1311),
        tree-limbs                          (1312),
        utility-pole-down                   (1314),
        downed-power-lines                  (1295),     -- Alternative Rendering:  fallen
                                                        -- power lines
        downed-cables                       (1296),     -- Alternative Rendering:  fallen
                                                        -- cables
        subsidence                          (1297),     -- Alternative Rendering: road
                                                        -- collapse
        road-surface-collapse               (1298),
        frost-jacking                       (1317),     -- A unique Alaska problem caused
                                                        -- by culverts or other features
                                                        -- jacking out of ground due to
                                                        -- freezing
        frost-heave                         (1316),     -- A large standing wave of soil
                                                        -- under pavement due to frost
                                                        -- action
```

```
pavement-buckled                      (1299),
pothole                               (1300),
flooding                              (1301),
broken-water-main                     (1302),
collapsed-sewer                       (1303),
wash-out                              (1319),    -- What can happen to roads
washboard                             (1318),    -- A term for rough road or
                                                 -- unpaved roads

sewer-overflow                        (1304),
gas-leak                              (1305),
snowmelt                              (1306),    -- Hint: Typically used as a
                                                 -- cause

mudslide                              (1307),
avalanche                             (1308),    -- Possibly a disaster as well
rockfall                              (1309),
landslide                             (1310),
-- Cancel Types
clearance-work                        (1406),
obstruction-cleared                   (1407),
-- Delays, Status, And Cancellations
-- Delays
delays                                (1537),
short-delays                          (1538),
long-delays                           (1539),
very-long-delays                      (1540),
delays-of-uncertain-duration          (1541),
delayed-until-further-notice          (1542),
busy                                  (1543),    -- Hint: Combine with generic
                                                 -- locations (station busy, etc.)

very-busy                             (1544),
crowded                               (1545),
overcrowded                           (1546),
-- Cancellations
cancellations                         (1547),
route-cancelled-and-no-replacement    (1548),
service-cancelled                     (1549),
service-suspended                     (1550),
service-withdrawn                     (1551),
service-fully-booked                  (1552),
all-services-fully-booked             (1553),
-- Service Levels
next-departure                        (1554),    -- Typically followed by a time
                                                 -- value
next-arrival                          (1555),    -- Typically followed by a #
                                                 -- value of time

very-frequent-service                 (1556),
frequent-service                      (1557),
fairly-frequent-service               (1558),
regular-service                       (1559),
irregular-service                     (1560),
not-operating                         (1561),
-- Other
system-busy                           (1562),    -- In this context "system" means
                                                 -- the entire network of services
                                                 -- over a wide area such as an
                                                 -- airline system

system-very-busy                      (1563),
system-crowded                        (1564),
system-overcrowded                    (1565),
travel-time                           (1566),    -- Typically followed by a #
                                                 -- value of time
headway                               (1567),    -- Typically followed by a #
                                                 -- value of time

extra-services-in-operation           (1568),
-- Cancel Types
delays-clearing                       (1660),
delays-cleared                        (1661),
normal-services-resumed               (1662),
operating                             (1663),    -- Use operating for "services"
                                                 -- such as bus service

-- Unusual Driving
vehicle-traveling-wrong-way           (1793),
```

```
reckless-driver                                   (1794),   -- Alternative Rendering:
                                                            -- erratic driver

prohibited-vehicle-on-roadway                     (1795),
emergency-vehicles-on-roadway                     (1796),
high-speed-emergency-vehicles                     (1797),
high-speed-chase                                  (1798),
-- Cancel Types
dangerous-vehicle-warning-cleared                 (1918),
emergency-vehicle-warning-cleared                 (1919),
-- Mobile Situation
abnormal-load                                     (2049),
wide-load                                          (2050),
long-load                                          (2051),
slow-vehicle                                       (2052),
farm-equipment                                     (2053),
horse-drawn-vehicles                               (2054),
overheight-load                                    (2055),
overweight-load                                    (2056),
tracked-vehicle                                    (2057),
vehicle-carrying-hazardous-materials               (2058),
slow-moving-maintenance-vehicle                    (2059),   -- Hint: mowing, line stripping,
                                                            -- sweepers, etc.

convoy                                             (2060),
military-convoy                                    (2061),
refugee-convoy                                     (2062),
motorcade                                          (2063),
mobile-situation-repositioning                     (2064),
winter-maintenance-vehicles                        (2065),
snowplows                                          (2066),
-- Cancel Types
slow-moving-maintenance-vehicle-warning-cleared (2172),
exceptional-load-warning-cleared                   (2173),
hazardous-load-warning-cleared                     (2174),
convoy-cleared                                     (2175),
-- Device And Equipment Status
lane-control-signs-not-working                     (2305),
lane-control-signs-working-incorrectly             (2306),
lane-control-signs-operating                       (2307),
variable-message-signs-not-working                 (2308),
variable-message-signs-working-incorrectly (2309),
variable-message-signs-operating                   (2310),
emergency-telephones-not-working                   (2311),
emergency-telephone-number-not-working             (2312),
traffic-lights-not-working                         (2313),
traffic-lights-working-incorrectly                 (2314),
ramp-control-signals-not-working                   (2315),
ramp-control-signals-working-incorrectly           (2316),
temporary-traffic-lights-not-working               (2317),
temporary-traffic-lights-working-incorrectly (2318),
traffic-signal-control-computer-not-working (2319),
traffic-signal-timings-changed                     (2320),
overheight-warning-system-triggered                (2321),
equipment-failure                                  (2322),
railroad-crossing-equipment-failure                (2323),
tunnel-ventilation-not-working                     (2324),
power-failure                                      (2325),   -- Hint: Use for localized cases
                                                            -- of power loss
widespread-power-outages                           (2326),   -- Alternative  rendering:
                                                            -- widespread power cuts

technical-problems                                 (2327),
sign-down                                          (2328),
lines-in-road-faded                                (2329),
damaged-light-standard                             (2330),   -- Used for all forms of pole /
                                                            -- support damage

traffic-signal-stuck-on-flash                      (2331),
guide-rail                                         (2332),   -- Used for barriers as well
fencing                                            (2333),
light-standard-hanging-by-wires                    (2334),
call-box                                           (2335),
signal-cabinet                                     (2336),   -- Use for all types of equipment
                                                            -- cabinets
detector                                           (2337),   -- All forms of vehicle detectors
```

```
improper-use-of-State-vehicle-or-equipment (2338),
bulb-out                                   (2339),
not-yet-operational                        (2340),   -- When installed but not yet
                                                     -- brought on-line for use by the
                                                     -- system
not-yet-installed                          (2341),   -- When planned
-- Cancel Types
electronic-signs-repaired                  (2428),
emergency-call-facilities-restored         (2429),
traffic-signals-repaired                   (2430),
railroad-crossing-equipment-now-working-normally (2431),
-- Restrictions
restrictions                               (2561),
ramp-restrictions                          (2562),
truck-restriction                          (2563),
speed-restriction                          (2564),
noise-restriction                          (2565),
traffic-regulations-have-been-changed      (2566),
local-access-only                          (2567),
no-trailers                                (2568),
no-high-profile-vehicles                   (2569),
hazardous-materials-truck-restriction      (2570),
no-through-traffic                         (2571),
no-motor-vehicles                          (2572),
width-limit                                (2573),   -- Typically followed by a number
                                                     -- and unit value
height-limit                               (2574),   -- Typically followed by a number
                                                     -- and unit value
length-limit                               (2575),   -- Typically followed by a number
                                                     -- and unit value
axle-load-limit                            (2576),   -- Typically followed by a number
                                                     -- and unit value
gross-weight-limit                         (2577),   -- Typically followed by a number
                                                     -- and unit value
axle-count-limit                           (2578),   -- Typically followed by a number
                                                     -- and unit value
carpool-lane-available                     (2579),
carpool-restrictions-changed               (2580),
hOV-2-no-single-occupant-vehicles          (2581),
hOV-3-no-vehicles-with-less-than-three-occupants (2582),
bus-lane-available-for-all-vehicles        (2583),
truck-lane-available-for-all-vehicles      (2584),
permits-call-in-basis                      (2585),
permits-temporarily-closed                 (2586),
permits-closed                             (2587),
-- Cancel Types
permits-open                               (2675),
restrictions-for-high-profile-vehicles-lifted (2676),
width-limit-lifted                         (2677),
height-limit-lifted                        (2678),
length-limit-lifted                        (2679),
axle-load-limit-lifted                     (2680),
weight-limit-lifted                        (2681),
axle-count-limit-lifted                    (2682),
carpool-restrictions-lifted                (2683),
lane-restrictions-lifted                   (2684),
ramp-restrictions-lifted                   (2685),
motor-vehicle-restrictions-lifted          (2686),
restrictions-lifted                        (2687),
-- Incident Response Status
unconfirmed-report                         (2817),
initial-response-en-route                  (2818),
follow-up-response-en-route                (2819),
initial-response-on-scene                  (2820),
follow-up-response-on-scene                (2821),
confirmed-report                           (2822),
scene-is-unsecured-at-this-time            (2823),   -- Caution: This has different
                                                     -- meanings in Public Safety use
response-scene-secured                     (2824),   -- Caution: This has different
                                                     -- meanings in Public Safety use
rescue-and-recovery-work-in-progress       (2825),
extraction-in-progress                     (2826),
```

```
clearance-work-in-progress          (2827),
body-removal-operations             (2828),
fire-containment-contained          (2829),
fire-containment-not-contained      (2830),
event-cleared                       (2831),   -- Meaning that responder has
                                              -- left scene, not that
                                              -- surrounding traffic has
                                              -- cleared to a normal level

traffic-clearing                    (2832),
incident-closed                     (2833),   -- A "case closed" meaning which
                                              -- can differ considerably by
                                              -- local agency policies


-- Disasters
-- Water Related
flash-flood                         (3073),
major-flood                         (3074),
reservoir-failure                   (3075),
levee-failure                       (3076),
tsunami                             (3077),
tidal-wave                          (3078),
-- Fire Related
volcanic-eruption                   (3079),
ash-fall                            (3080),
lava-flow                           (3081),
serious-fire                        (3082),
forest-fire                         (3083),
wildfire                            (3084),
building-fire                       (3085),
brush-fire                          (3086),
grass-fire                          (3087),
fire-danger-extreme                 (3088),
fire-danger-very-high               (3089),
fire-danger-high                    (3090),
fire-danger-medium                  (3091),
fire-danger-low                     (3092),
-- Other
earthquake-damage                   (3093),
air-crash                           (3094),
rail-crash                          (3095),
toxic-release                       (3096),
toxic-leak                          (3097),
radioactive-release                 (3098),
radiation-hazard                    (3099),
reactor-leakage                     (3100),
explosion                           (3101),
major-hazardous-materials-fire      (3102),   -- Alternative Rendering:  Major
                                              -- HAZMAT fire
major-hazardous-materials-release   (3103),   -- Alternative Rendering:  Major
                                              -- HAZMAT release

-- Cancel Types
disaster-cleared                    (3199),
-- Disturbances
assault                             (3329),   -- This index is not to be used
                                              -- as a default value for this
                                              -- category
crime                               (3330),
robbery                             (3331),
fare-dispute                        (3332),
shooting                            (3333),
gunfire-on-roadway                  (3334),
suicide                             (3335),
fight                               (3336),   -- Involves a few  persons and is
                                              -- localized (alt: brawl)
gang-fight                          (3337),   -- Multi-party event occurring
                                              -- which may involve weapons
person-harassment                   (3338),   -- "person" may be rendered as
                                              -- "passenger" if used in a
                                              -- controlled environment such as
                                              -- transit
person-injured                      (3339),
sick-customer                       (3363),
unruly-passenger                    (3340),
```

```
person-intoxicated                          (3341),
crowd-control-problem                       (3342),
demonstration                               (3343),
march                                       (3344),
public-disturbance                          (3345),
riot                                        (3346),
civil-unrest                                (3347),
civil-emergency                             (3348),
strike                                      (3349),
public-transit-strike                       (3350),   -- Hint: Strike affecting
                                                      -- services
stampede                                    (3351),
teargas-used                                (3352),
security-alert                              (3353),   -- Heightened security procedures
                                                      -- in effect
security-incident                           (3354),
checkpoint                                  (3355),
bomb-alert                                  (3356),
terrorist-incident                          (3357),
high-velocity-shell-fire                    (3358),   -- Hint: Used as a part of
                                                      -- avalanche control
explosives-in-use                           (3359),
air-raid                                    (3360),
weapons-of-mass-destruction-threat          (3361),
military-operations                         (3362),   -- (war)
-- Cancel Types
security-problem-cleared                    (3454),
traffic-disturbance-cleared                 (3455),
-- Sporting Events
sports-event                                (3585),
game                                        (3586),
tournament                                  (3587),
track-and-field-event                       (3588),
baseball-game                               (3589),
basketball-game                             (3590),
boxing-match                                (3591),
football-game                               (3592),
soccer-game                                 (3593),
golf-tournament                             (3594),
hockey-game                                 (3595),
tennis-tournament                           (3596),
wrestling-match                             (3597),
road-race                                   (3598),   -- Hint: used for motorcycle
                                                      -- races as well
automobile-race                             (3599),
bicycle-race                                (3600),
race-event                                  (3601),
marathon                                    (3602),
horse-show                                  (3603),
rodeo                                       (3604),
water-sports-event                          (3605),
winter-sports-event                         (3606),
skating-event                               (3607),
dog-sled-race                               (3608),
-- Cancel Types
sporting-event-ended                        (3711),
-- Special Events
major-event                                 (3841),
airshow                                     (3842),
hot-air-ballooning                          (3843),
concert                                     (3844),
state-occasion                              (3845),
vIP-visit                                   (3846),
show                                        (3847),
festival                                    (3848),   -- Used for farmers' markets as
                                                      -- well
exhibition                                  (3849),
performing-arts                             (3850),
outdoor-market                              (3851),   -- Used for farmers' markets as
                                                      -- well
fair                                        (3852),
carnival                                    (3853),
```

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    fireworks-display                        (3854),
    trade-expo                               (3855),
    movie-filming                            (3856),
    presidential-visit                       (3857),
    parade                                   (3858),
    procession                               (3859),
    funeral-procession                       (3860),
    crowd                                    (3861),
    holiday-traffic-crowds                   (3862),
    -- Cancel Types
    event-ended                              (3967),
    -- Parking Information
    normal-parking-restrictions-lifted       (4097),    -- Hint: used when a PARKING
                                                        -- restriction is lifted
                                                        -- (overnight parking allowed
                                                        -- during event)  Not to be used
                                                        -- as a default for this category
    parking-meter-restrictions-lifted        (4098),    -- Hint: used when a METER
                                                        -- restriction is lifted (metered
                                                        -- parking free during event)
    special-parking-restrictions-in-force    (4099),
    full-parking-lot                         (4100),
    full-parking-garage                      (4101),
    all-parking-lots-full                    (4102),
    no-parking-spaces-available              (4103),
    only-a-few-spaces-available              (4104),
    spaces-available                         (4105),    -- Typically preceded by a #
                                                        -- value
    no-parking                               (4106),
    parking-on-one-side-of-street-only       (4107),
    parking-on-both-sides-of-street          (4108),
    parallel-parking-only                    (4109),
    parking-meters-not-available             (4110),
    use-of-parking-meters-restricted         (4111),
    event-parking                            (4112),
    handicapped-parking                      (4113),
    long-term-parking                        (4114),
    overnight-parking                        (4115),
    short-term-parking                       (4116),
    parking-by-permit-only                   (4117),    -- NEW: Added March 2005
    -- Cancel Types
    special-parking-restrictions-lifted      (4222),
    no-parking-information-available         (4223),
    -- Information System
    information-available-on-radio           (4353),    -- Not to be used as a default
                                                        -- for this category
    information-available-on-TV              (4354),
    call-to-get-information                  (4355),
    information-available-via-Internet       (4356),
    test-message                             (4357),    -- Not to be displayed on
                                                        -- consumer devices if possible
    no-information-available                 (4358),    -- Typically combined with "on
                                                        -- xxx service" where xxx is a
                                                        -- type of service (bus, rail,
                                                        -- etc.)
    null-description                         (4359),    -- (but with event location or
                                                        -- other information provided in
                                                        -- the message)
    information-service-is-being-suspended   (4360),
    -- Cancel Types
    information-service-resumed              (4478),
    message-canceled                         (4479),    -- Not Recommended for use
    -- Weather Conditions
    -- General Weather
    overcast                                 (4609),    -- This index is not to be used
                                                        -- as a default value for this
                                                        -- category
    cloudy                                   (4610),
    mostly-cloudy                            (4611),
    partly-cloudy                            (4612),
    partly-sunny                             (4613),
    mostly-sunny                             (4614),
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sunny                           (4615),
fair-skies                      (4616),
clear-skies                     (4617),
mostly-clear                    (4618),
mostly-dry                      (4619),
dry                             (4620),
uV-index-very-high              (4621),
uV-index-high                   (4622),
uV-index-moderate               (4623),
uV-index-low                    (4624),
uV-index-very-low               (4625),
barometric-pressure             (4626),   -- Typically followed by a number
                                          -- and value
ozone-alert                     (4627),
-- Lighting Types
lighting-unknown                (4628),   -- NEW: Added March 2005
artificial-exterior-light       (4629),   -- NEW: Added March 2005
artificial-interior-light       (4630),   -- NEW: Added March 2005
darkness                        (4631),   -- NEW: Added March 2005 Also
                                          -- used when not lighted
dusk                            (4632),   -- NEW: Added March 2005
dawn                            (4633),   -- NEW: Added March 2005
moonlight                       (4634),   -- NEW: Added March 2005
daylight                        (4635),   -- NEW: Added March 2005
-- Cancel Types
weather-forecast-withdrawn      (4735),
-- Precipitation
severe-weather                  (4865),
blizzard                        (4866),
heavy-snow                      (4867),
snow                            (4868),
light-snow                      (4869),
snow-showers                    (4870),
winter-storm                    (4871),
ice-glaze                       (4872),
heavy-frost                     (4873),
frost                           (4874),
ice-storm                       (4875),
sleet                           (4876),
rain-and-snow-mixed             (4877),
rain-changing-to-snow           (4878),
damaging-hail                   (4879),
hail                            (4880),
thunderstorms                   (4881),
thundershowers                  (4882),
extremely-heavy-downpour        (4883),
heavy-rain                      (4884),
rain                            (4885),
light-rain                      (4886),
drizzle                         (4887),
showers                         (4888),
dew                             (4889),
-- Cancel Types
precipitation-cleared           (4991),
-- Winds
tornado                         (5121),   -- Note that this can be combined
                                          -- with "alert" "warning" etc.
                                          -- This index is not to be used
                                          -- as a default value for this
                                          -- category
hurricane                       (5122),
hurricane-force-winds           (5123),
tropical-storm                  (5124),
gale-force-winds                (5125),
storm-force-winds               (5126),
strong-winds                    (5127),
moderate-winds                  (5128),
light-winds                     (5129),
calm                            (5130),
gusty-winds                     (5131),
crosswinds                      (5132),
windy                           (5133),
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   -- Cancel Types
strong-winds-have-eased               (5246),
strong-wind-forecast-withdrawn        (5247),
   -- Visibility & Air Quality
   -- Visibility
dense-fog                             (5377),   -- This index is not to be used
                                                -- as a default value for this
                                                -- category

fog                                   (5378),
patchy-fog                            (5379),
freezing-fog                          (5380),
ice-fog                               (5405),   -- Different than freezing fog,
                                                -- ice fog occurs well below
                                                -- freezing temps and is quite
                                                -- common in the Fairbanks area.

mist                                  (5381),
haze                                  (5382),
visibility-reduced                    (5383),
visibility-blocked                    (5404),   -- Used when signs, trees, etc.,
                                                -- block the view
white-out                             (5384),   -- Alternative Rendering:  Snow
                                                -- glare
blowing-snow                          (5385),
smoke-hazard                          (5386),
spray-hazard                          (5387),
low-sun-glare                         (5388),   -- Do not use for snow glare
snow-glare                            (5389),
blowing-dust                          (5390),
blowing-sand                          (5391),   -- Hint: dune accumulations
dust-storms                           (5392),
sandstorms                            (5393),
   -- Air Quality
air-quality-good                      (5394),
air-quality-fair                      (5395),
air-quality-poor                      (5396),
air-quality-very-poor                 (5397),
severe-exhaust-pollution              (5398),
smog-alert                            (5399),
pollen-count-high                     (5400),
pollen-count-medium                   (5401),
pollen-count-low                      (5402),
swarms-of-insects                     (5403),
   -- Cancel Types
fog-clearing                          (5499),
visibility-improved                   (5500),
fog-forecast-withdrawn                (5501),
pollution-alert-ended                 (5502),
air-quality-improved                  (5503),
   -- Temperature
maximum-temperature                   (5633),   -- This index is not to be used
                                                -- as a default value for this
                                                -- category
temperature                           (5634),   -- Typically followed by a number
                                                -- value and a unit value
minimum-temperature                   (5635),
current-temperature                   (5636),
heat-index                            (5637),
extreme-heat                          (5638),
hot                                   (5639),
hotter                                (5640),
heat                                  (5641),
warmer                                (5642),
warm                                  (5643),
mild                                  (5644),
cool                                  (5645),
cooler                                (5646),
cold                                  (5647),
colder                                (5648),
very-cold                             (5649),
extreme-cold                          (5650),
wind-chill                            (5651),
dewpoint                              (5652),
```

```
relative-humidity                       (5653),
-- Cancel Types
temperatures-close-to-the-seasonal-norm (5758),
less-extreme-temperatures               (5759),
-- Pavement Conditions
-- General
impassable                              (5889),
almost-impassable                       (5890),
passable-with-care                      (5891),
passable                                (5892),
surface-water-hazard                    (5893),
danger-of-hydroplaning                  (5894),
wet-pavement                            (5895),
treated-pavement                        (5896),   -- Alternative Rendering:
                                                  -- chemical wet
slippery                                (5897),
-- On Roadway items
mud-on-roadway                          (5898),
leaves-on-roadway                       (5899),
loose-sand-on-roadway                   (5900),
loose-gravel                            (5901),
fuel-on-roadway                         (5902),
oil-on-roadway                          (5903),
road-surface-in-poor-condition          (5904),
melting-tar                             (5905),
-- Ice & Snow
ice                                     (5906),
icy-patches                             (5907),
black-ice                               (5908),
ice-pellets-on-roadway                  (5909),
ice-build-up                            (5910),
freezing-rain                           (5911),
wet-and-icy-roads                       (5912),
melting-snow                            (5913),
slush                                   (5914),
frozen-slush                            (5915),
snow-on-roadway                         (5916),
packed-snow                             (5917),
packed-snow-patches                     (5918),
plowed-snow                             (5919),
wet-snow                                (5920),
fresh-snow                              (5921),
powder-snow                             (5922),
granular-snow                           (5923),
frozen-snow                             (5924),
crusted-snow                            (5925),
deep-snow                               (5926),
snow-drifts                             (5927),
drifting-snow                           (5928),
expected-snow-accumulation              (5929),
current-snow-accumulation               (5930),
-- Cancel Types
dry-pavement                            (6011),
snow-cleared                            (6012),
pavement-conditions-improved            (6013),
skid-hazard-reduced                     (6014),
pavement-conditions-cleared             (6015),
-- Winter Driving Restrictions and Recommendations
winter-equipment-recommended            (6145),
winter-equipment-required               (6146),
snow-chains-recommended                 (6147),
snow-chains-required                    (6148),
snow-chains-prohibited                  (6149),
studded-tires-prohibited                (6150),
snow-tires-recommended                  (6151),
snow-tires-required                     (6152),
four-wheel-drive-recommended            (6153),
four-wheel-drive-required               (6154),
snow-tires-or-chains-recommended        (6155),
snow-tires-or-chains-required           (6156),
-- Cancel Types
winter-driving-requirements-lifted      (6157),
```

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-- Winter Driving Index
driving-conditions-good                    (6401),
driving-conditions-fair                    (6402),
difficult-driving-conditions               (6403),
very-difficult-driving-conditions          (6404),
hazardous-driving-conditions               (6405),
extremely-hazardous-driving-conditions     (6406),
-- Suggestion Advice
why-not-ride-share                         (6657),
is-this-your-no-ride-day                   (6658),
why-not-use-transit                        (6659),
why-not-park-and-ride                       (6660),
why-not-try-paratransit                    (6661),
why-not-travel-by-rail                     (6662),
why-not-use-the-subway                     (6663),
why-not-try-rapid-transit                  (6664),
why-not-travel-by-bus                      (6665),
your-parking-ticket-covers-the-return-ride (6666),
avoid-the-rush-hour                        (6667),
do-not-allow-unnecessary-gaps             (6668),
follow-the-vehicle-in-front-smoothly       (6669),
do-not-slow-down-unnecessarily             (6670),
watch-for-muggers                          (6671),
watch-for-pickpockets                      (6672),
watch-for-thieves                          (6673),
sorry-for-any-delay                        (6674),
thank-you-for-your-understanding           (6675),
we-appreciate-your-patience                (6676),
we-are-grateful-for-your-cooperation       (6677),
-- Warning Advice
risk                                       (6913),  -- Conditions are more likely
                                                    -- than "normal"
watch                                      (6914),  -- Conditions are favorable for
                                                    -- an event to occur
warning                                    (6915),  -- An event has occurred but is
                                                    -- not (yet) near
alert                                      (6916),  -- An event has occurred and it
                                                    -- is near
danger                                     (6917),
danger-of-explosion                        (6918),
danger-of-fire                             (6919),
extra-police-patrols-in-operation          (6920),
look-out-for-vehicles-stopped-under-bridges (6921),
increased-risk-of-accident                 (6922),
rescue-and-recovery-work-in-progress-at-scene (6923),
police-at-scene                            (6924),
emergency-vehicles-at-scene                (6925),
traffic-being-directed-around-accident-area (6926),
police-directing-traffic                   (6927),
rescue-workers-directing-traffic           (6928),
repairs-in-progress                        (6929),
pilot-car-in-operation                     (6930),
look-out-for-flagger                       (6931),  -- Alternative Rendering:  look
                                                    -- out for flagman
police-checks-in-operation                 (6932),  -- Hint: all types of checks
truck-check-point                          (6937),
lockdown                                   (6935),
security-check-point                       (6936),
single-occupancy-vehicle-check-point       (6938),
mandatory-speed-limit-in-force             (6933),
speed-limit-in-force-for-heavy-vehicles    (6934),
-- Cancel Types
warning-canceled                           (7034),  -- Canceling a warning may
                                                    -- "revert" to a watch
watch-canceled                             (7035),
alert-canceled                             (7036),  -- Canceling an alert may
                                                    -- "revert" to a warning
ended                                      (7037),  -- Hint: used for many sporting /
                                                    -- special events
cleared                                    (7038),
canceled                                   (7039),
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-- Instructions (Recommendations)
drive-carefully                         (7169),
drive-with-extreme-caution              (7170),
approach-with-care                      (7171),
keep-your-distance                      (7172),
increase-normal-following-distance      (7173),
test-your-brakes                        (7174),
cross-intersection-with-care            (7175),
pass-with-care                          (7176),
use-low-beam-headlights                 (7177),
use-fog-lights                          (7178),
use-hazard-warning-lights               (7179),   -- Alternative Rendering:  use
                                                  -- blinkers
do-not-leave-your-vehicle               (7180),
leave-your-vehicle-and-proceed-to-next-safe-place (7181),
turn-off-engine                         (7182),   -- Alternative Rendering:  switch
                                                  -- off engine
close-all-windows-turn-off-heater-air-conditioner-and-vents (7183),
turn-off-air-conditioner-to-prevent-engine-overheating (7184),
turn-off-mobile-phones-and-two-way-radios (7185), -- Alternative Rendering:  switch
                                                  -- off mobile phones and two way
                                                  -- radios
prepare-to-stop                         (7186),
stop-at-next-rest-area                  (7187),
stop-at-next-safe-place                 (7188),
only-travel-if-absolutely-necessary     (7189),
drive-to-another-service-area           (7190),
use-through-traffic-lanes               (7191),
use-local-traffic-lanes                 (7192),
use-left-hand-parallel-roadway          (7193),
use-right-hand-parallel-roadway         (7194),
use-heavy-vehicle-lane                  (7195),   -- Alternative Rendering:  use
                                                  -- truck lanes
observe-recommended-speed               (7196),
-- Instructions (Mandatory)
keep-to-the-right                       (7425),
keep-to-the-left                        (7426),
use-right-lane                          (7427),
use-left-lane                           (7428),
heavy-vehicles-use-right-lane           (7429),
heavy-vehicles-use-left-lane            (7430),
observe-signals                         (7431),
observe-signs                           (7432),
no-passing                              (7433),
no-smoking                              (7434),
no-open-flames                          (7435),
use-shoulder-as-lane                    (7436),
do-not-drive-on-the-shoulder            (7437),
allow-emergency-vehicles-to-pass        (7438),
clear-a-lane-for-emergency-vehicles     (7439),
pull-over-to-the-edge-of-the-roadway    (7440),
wait-for-escort-vehicle                 (7441),
in-emergency-wait-for-police-patrol     (7442),
reduce-your-speed                       (7443),
observe-speed-limits                    (7444),
check-point                             (7445),
entry-requirements                      (7446),
insurance-requirements                  (7447),
firearms-requirements                   (7448),
pet-requirements                        (7449),
-- Cancel Types
shoulder-travel-no-longer-allowed       (7547),
-- Qualifiers
-- Locations
above                                   (7681),   -- Not to be used as the default
                                                  -- for this category
below                                   (7682),
in                                      (7683),
around                                  (7684),
after                                   (7685),
before                                  (7686),
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at                              (7687),   -- Hint: used in conjunction with
                                          -- generic locations
on                              (7688),   -- Hint: used in conjunction with
                                          -- "roadway" or other terms
near                            (7689),   -- Hint: used with generic
                                          -- locations and lanes
from-the                        (7690),
terminal                        (7691),
-- Weather Related
falling-slowly                  (7692),
falling                         (7693),
falling-quickly                 (7694),
rising-slowly                   (7695),
rising                          (7696),
rising-quickly                  (7697),
steady                          (7698),
likely                          (7699),
changing-to                     (7700),
mostly                          (7701),
partly                          (7702),
minus                           (7703),
weather-ended                   (7704),
expected                        (7705),
low                             (7706),   -- Typically used in
                                          -- temperatures. See also "upper"
mid                             (7707),
high                            (7708),
upper                           (7709),   -- Typically used in
                                          -- temperatures. See also "low"
unseasonably                    (7710),
reported                        (7711),
-- Instructions
advice                          (7712),
due-to                          (7713),
proceed-to                      (7714),
transferred-to                  (7715),
use                             (7716),
-- Prepositional Use
affecting                       (7717),
blocking                        (7718),
connecting                      (7719),
finished                        (7720),
for                             (7721),
or                              (7722),
-- Other
and                             (7723),
later                           (7724),
level                           (7725),
shortly                         (7726),
soon                            (7727),
service                         (7728),
graffiti                        (7733),
damaged                         (7729),
out-of-order                    (7730),
on-State-right-of-way           (7732),
found-property                  (7734),
vandalism                       (7731),
-- Generic Locations
-- Road Related
on-bridges                      (7937),   -- Not to be used as the default
                                          -- for this category
in-tunnels                      (7938),
entering-or-leaving-tunnels     (7939),
on-ramps                        (7940),
in-road-construction-area       (7941),
around-a-curve                  (7942),
on-minor-roads                  (7943),
in-the-opposing-lanes           (7944),
adjacent-to-roadway             (7945),
on-bend                         (7946),
entire-intersection             (7947),
in-the-median                   (7948),
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moved-to-side-of-road            (7949),
moved-to-shoulder                (7950),
on-the-roadway                   (7951),    -- Use generic locations and
                                            -- groups affected to make other
                                            -- such phrases

-- Terrain & Geography
in-shaded-areas                  (7952),
in-low-lying-areas               (7953),
in-the-downtown-area             (7954),
in-the-inner-city-area           (7955),
in-parts                         (7956),
in-some-places                   (7957),
in-the-ditch                     (7958),
in-the-valley                    (7959),
on-hill-top                      (7960),
near-the-foothills               (7961),
at-high-altitudes                (7962),
near-the-lake                    (7963),
near-the-shore                   (7964),
nearby-basin                     (8008),    -- NEW: Added in March 2005
                                            -- review
over-the-crest-of-a-hill         (7965),
other-than-on-the-roadway        (7966),
near-the-beach                   (7967),
near-beach-access-point          (7968),
mountain-pass                    (8006),
lower-level                      (7969),
upper-level                      (7970),
-- Transit Travel, Air Travel and Places
airport                          (7971),
concourse                        (7972),
gate                             (7973),
baggage-claim                    (7974),
customs-point                    (7975),
reservation-center               (8007),
station                          (7976),
platform                         (7977),    -- Alternative Rendering:  track
dock                             (7978),
depot                            (7979),
ev-charging-point                (7980),
information-welcome-point        (7981),
at-rest-area                     (7982),
at-service-area                  (7983),
at-weigh-station                 (7984),
picnic-areas                     (7985),
rest-area                        (7986),
service-stations                 (7987),
toilets                          (7988),
-- Direction of Travel
on-the-right                     (7989),
on-the-left                      (7990),
in-the-center                    (7991),
in-the-opposite-direction        (7992),
cross-traffic                    (7993),
northbound-traffic               (7994),
eastbound-traffic                (7995),
southbound-traffic               (7996),
westbound-traffic                (7997),
-- Compass Points
north                            (7998),
south                            (7999),
east                             (8000),
west                             (8001),
northeast                        (8002),
northwest                        (8003),
southeast                        (8004),
southwest                        (8005),
-- Lane / Roadway Descriptions
-- Lanes
all-roadways                     (8193),    -- Used as the default value
through-lanes                    (8194),
left-lane                        (8195),
```

```
right-lane                        (8196),
center-lane                       (8197),
middle-lanes                      (8198),
middle-two-lanes                  (8199),
right-turning-lanes               (8200),
left-turning-lanes                (8201),
upper-deck-lanes                  (8236),   -- NEW: Added March 2005
lower-deck-lanes                  (8237),   -- NEW: Added March 2005
reversible-lanes                  (8238),   -- NEW: Added March 2005
right-exit-lanes                  (8239),   -- NEW: Added March 2005
left-exit-lanes                   (8240),   -- NEW: Added March 2005
right-merging-lanes               (8241),   -- NEW: Added March 2005
left-merging-lanes                (8242),   -- NEW: Added March 2005
-- Ramps
right-exit-ramp                   (8202),
right-second-exit-ramp            (8243),   -- NEW: Added March 2005
right-entrance-ramp               (8203),
right-second-entrance-ramp        (8245),   -- NEW: Added March 2005
left-exit-ramp                    (8204),
left-second-exit-ramp             (8244),   -- NEW: Added March 2005
left-entrance-ramp                (8205),
left-second-entrance-ramp         (8246),   -- NEW: Added March 2005
escape-ramp                       (8234),   -- A truck feature on steep
                                            -- downgrades common in both
                                            -- Alaska and elsewhere.

-- Shoulders
hard-shoulder                     (8206),
soft-shoulder                     (8207),
right-shoulder                    (8208),
left-shoulder                     (8209),
-- Other
highways                          (8235),
right-hand-parallel-lanes         (8210),   -- Alternative Rendering:
                                            -- right-hand frontage road
left-hand-parallel-lanes          (8211),   -- Alternative Rendering:
                                            -- left-hand frontage road
connecting-lanes                  (8212),
express-lanes                     (8213),
local-lanes                       (8214),
toll-lanes                        (8215),
electronic-toll-lanes             (8216),
toll-plaza                        (8217),
inspection-lane                   (8218),   -- Alternative Rendering:  Border
                                            -- patrol inspection lane
hOV-lanes                         (8219),
bus-lanes                         (8220),
carpool-lanes                     (8221),
truck-lanes                       (8222),
emergency-lanes                   (8223),
passing-lanes                     (8224),
climbing-lanes                    (8225),
slow-lane                         (8226),   -- Alternative Rendering:
                                            -- Crawler lane
service-road                      (8227),   -- Alternative Rendering:
                                            -- Frontage Road
cycle-lane                        (8228),
-- Bridges, Tunnels
bridge                            (8229),
overpass                          (8230),
elevated-lanes                    (8231),
underpass                         (8232),
tunnel                            (8233),
-- Alternate Route
detour-where-possible             (8449),
no-detour-available               (8450),
follow-signs                      (8451),
follow-detour-signs               (8452),
follow-special-detour-markers     (8453),
do-not-follow-detour-signs        (8454),
detour-in-operation               (8455),
follow-local-detour               (8456),
```

```
compulsory-detour-in-operation           (8457),
no-suitable-detour-available             (8458),
detour-is-no-longer-recommended          (8459),
local-drivers-are-recommended-to-avoid-the-area (8460),
trucks-are-recommended-to-avoid-the-area (8461),
consider-alternate-route                 (8462),
consider-alternate-parking               (8463),
consider-alternate-destination           (8464),
consider-alternate-area                  (8465),
-- Unit Values
-- Areas,  Distances  &  Speeds
square-feet                              (8705),
square-meters                            (8706),
acres                                    (8707),
hectares                                 (8708),
inches                                   (8709),
feet                                     (8710),
mile                                     (8711),   -- Hint: used for offset as in
                                                   -- "at mile 123"  Alternative
                                                   -- Rendering: milepost marker
miles                                    (8712),   -- Hint: Used for distance, as in
                                                   -- "ending 5 miles"
nautical-miles                           (8713),
millimeters                              (8714),
meters                                   (8715),
kilometer                                (8716),   -- Hint: used for offset as in
                                                   -- "at kilometer 123"
kilometers                               (8717),
feet-per-second                          (8718),
meters-per-second                        (8719),
mPH                                      (8720),
kPH                                      (8721),
knots                                    (8722),
-- Times,  Days  &  Dates
aM                                       (8723),   -- Both a time value and a radio
                                                   -- band value.  A number value
                                                   -- may PRECEDE the unit value
                                                   -- used in representing the
                                                   -- frequency of a radio station
pM                                       (8724),
weekends                                 (8725),   -- In general date/time values
                                                   -- can be better coded in other
                                                   -- ways in most message sets
holiday                                  (8726),
seconds                                  (8727),
minutes                                  (8728),
hours                                    (8729),
days                                     (8730),   -- Hint: useful for events
                                                   -- occurring for at least 24
                                                   -- hours
weeks                                    (8731),
months                                   (8732),
-- Temps, Weights, Masses and Measurements
degrees                                  (8733),   -- Used for latitude, longitude
                                                   -- and bearing measured clockwise
                                                   -- from North
degrees-Celsius                          (8734),   -- Alternate renderings possible
degrees-Fahrenheit                       (8735),   -- Alternate renderings possible
grams                                    (8736),
kilograms                                (8737),
ounces                                   (8738),
pounds                                   (8739),
tons                                     (8740),
fluid-ounces                             (8741),
gallons                                  (8742),
milliliters                              (8743),
liters                                   (8744),
kilograms-per-lane-mile                  (8745),
tons-per-lane-mile                       (8746),
-- Misc.
dollar                                   (8747),   -- Alternative rendering: dollar
                                                   -- symbol  Not to be used as the
```

```
                                          -- default value for this
                                          -- category
percent                         (8748),   -- Alternative rendering: percent
                                          -- symbol
time-delimiter                  (8749),   -- Alternative rendering: "-"
dollars                         (8750),   -- Alternative rendering can use
                                          -- local currency sign
flight-number                   (8751),   -- A number value may PRECEDE the
                                          -- unit value in use
person-people                   (8752),
response-plan                   (8753),   -- A value may PRECEDE the unit
                                          -- value in use (involving a
                                          -- combination of numbers and /
                                          -- or letters)
placard-type                    (8754),   -- For hazmat class and division
                                          -- type designations, a value may
                                          -- PRECEDE the unit value in use
placard-number                  (8755),   -- For chemical designations, a
                                          -- value may PRECEDE the unit
                                          -- value in use
fM                              (8756),   -- A number value may PRECEDE the
                                          -- unit value in use representing
                                          -- the frequency of a radio
                                          -- station

-- Transit Mode
travel                          (8961),   -- Hint: may include all modes
transit                         (8962),   -- Hint: may include all public
                                          -- transit modes
bus                             (8963),
trolleybus                      (8964),
rail                            (8965),
commuter-rail                   (8966),
subway                          (8967),
rapid-transit                   (8968),
light-rail                      (8969),
streetcar                       (8970),   -- Alternative Rendering:  tram
dial-a-ride                     (8971),   -- Alternative Rendering:  demand
                                          -- responsive transit
park-and-ride                   (8972),
shuttle                         (8973),
free-shuttle                    (8974),   -- Alternative Rendering:  tram
airport-shuttle                 (8975),
taxies                          (8976),
ferry                           (8977),
passenger-ferry                 (8978),
vehicle-ferry                   (8979),
aerial-tramway                  (8980),
automated-guideway              (8981),   -- Include all types of guideways
cable-cars                      (8982),
monorail                        (8983),
air-travel                      (8984),   -- All modes of air travel
-- Vehicle Groups Affected
all-vehicles                    (9217),
bicycles                        (9218),
motorcycles                     (9219),   -- to include mopeds as well
cars                            (9220),   -- (remapped from ERM value of
                                          -- zero)
light-vehicles                  (9221),
cars-and-light-vehicles         (9222),
cars-with-trailers              (9223),
cars-with-recreational-trailers (9224),
vehicles-with-trailers          (9225),
heavy-vehicles                  (9226),
trucks                          (9227),
buses                           (9228),
articulated-buses               (9229),
school-buses                    (9230),
vehicles-with-semi-trailers     (9231),
vehicles-with-double-trailers   (9232),   -- Alternative Rendering:
                                          -- western doubles
high-profile-vehicles           (9233),
wide-vehicles                   (9234),
```

```
long-vehicles                              (9235),
hazardous-loads                            (9236),
exceptional-loads                          (9237),
abnormal-loads                             (9238),
convoys                                    (9239),
maintenance-vehicles                       (9240),
delivery-vehicles                          (9241),
vehicles-with-even-numbered-license-plates (9242),
vehicles-with-odd-numbered-license-plates  (9243),
vehicles-with-parking-permits              (9244),
vehicles-with-catalytic-converters         (9245),
vehicles-without-catalytic-converters      (9246),
gas-powered-vehicles                       (9247),
diesel-powered-vehicles                    (9248),
lPG-vehicles                               (9249),
military-convoys                           (9250),
military-vehicles                          (9251),
-- Traveler Group Affected
through-traffic                            (9473),
holiday-traffic                            (9474),
residents                                  (9475),
visitors                                   (9476),
long-distance-traffic                      (9477),
local-traffic                              (9478),
regional-traffic                           (9479),
arrivals                                   (9480),
departures                                 (9481),
airline-travelers                          (9482),
commuter-airline-travelers                 (9483),
domestic-airline-travelers                 (9484),
international-airline-travelers            (9485),
pedestrians                                (9486),
bicyclists                                 (9487),  -- Hint: may be used as a
                                                    -- traveler restriction, as in
                                                    -- "bicycles prohibited on
                                                    -- subways during rush hour" or
                                                    -- "road closed to bicyclists"

-- Responder Group Affected
emergency-vehicle-units                    (9729),  -- Default phrase, to be used
                                                    -- when one of the below does not
                                                    -- fit better

federal-law-enforcement-units              (9730),
state-police-units                         (9731),
county-police-units                        (9732),  -- Hint: also sheriff response
                                                    -- units
local-police-units                         (9733),
ambulance-units                            (9734),
rescue-units                               (9735),
fire-units                                 (9736),
hAZMAT-units                               (9737),
light-tow-unit                             (9738),
heavy-tow-unit                             (9739),
freeway-service-patrols                    (9740),
transportation-response-units              (9741),  -- NEW: Added March 2005
private-contractor-response-units          (9742),  -- NEW: Added March 2005
-- Incident Response Equipment
ground-fire-suppression                    (9985),
heavy-ground-equipment                     (9986),
aircraft                                   (9988),
marine-equipment                           (9989),
support-equipment                          (9990),
medical-rescue-unit                        (9991),
other                                      (9993),  -- Depreciated by fire standards,
                                                    -- do not use
ground-fire-suppression-other              (9994),
engine                                     (9995),
truck-or-aerial                            (9996),
quint                                      (9997),  -- A five-function type of fire
                                                    -- apparatus.  The units in the
                                                    -- movie Backdraft were quints
tanker-pumper-combination                  (9998),
brush-truck                                (10000),
```

```
aircraft-rescue-firefighting            (10001),
heavy-ground-equipment-other            (10004),
dozer-or-plow                           (10005),
tractor                                 (10006),
tanker-or-tender                        (10008),
aircraft-other                          (10024),
aircraft-fixed-wing-tanker              (10025),
helitanker                              (10026),
helicopter                              (10027),
marine-equipment-other                  (10034),
fire-boat-with-pump                     (10035),
boat-no-pump                            (10036),
support-apparatus-other                 (10044),
breathing-apparatus-support             (10045),
light-and-air-unit                      (10046),
medical-rescue-unit-other               (10054),
rescue-unit                             (10055),
urban-search-rescue-unit                (10056),
high-angle-rescue                       (10057),
crash-fire-rescue                       (10058),
bLS-unit                                (10059),
aLS-unit                                (10060),
mobile-command-post                     (10075),  -- Depreciated, do not use
chief-officer-car                       (10076),
hAZMAT-unit                             (10077),
type-i-hand-crew                        (10078),
type-ii-hand-crew                       (10079),
privately-owned-vehicle                 (10083),  -- (Often found in volunteer fire
                                                  -- teams)
other-apparatus-resource                (10084),  -- (Remapped from fire code zero)
ambulance                               (10085),
bomb-squad-van                          (10086),
combine-harvester                       (10087),
construction-vehicle                    (10088),
farm-tractor                            (10089),
grass-cutting-machines                  (10090),
hAZMAT-containment-tow                  (10091),
heavy-tow                               (10092),
light-tow                               (10094),
flatbed-tow                             (10114),  -- NEW: Added March 2005
hedge-cutting-machines                  (10093),
mobile-crane                            (10095),
refuse-collection-vehicle               (10096),
resurfacing-vehicle                     (10097),
road-sweeper                            (10098),
roadside-litter-collection-crews        (10099),
salvage-vehicle                         (10100),
sand-truck                              (10101),
snowplow                                (10102),
steam-roller                            (10103),
swat-team-van                           (10104),
track-laying-vehicle                    (10105),
unknown-vehicle                         (10106),
white-lining-vehicle                    (10107),  -- Consider using Roadwork "road
                                                  -- marking operations" unless the
                                                  -- objective is to refer to the
                                                  -- specific vehicle of this type.
                                                  -- Alternative Rendering: line
                                                  -- painting vehicle
dump-truck                              (10108),
supervisor-vehicle                      (10109),
snow-blower                             (10110),
rotary-snow-blower                      (10111),
road-grader                             (10112),  -- Alternative term: motor grader
steam-truck                             (10113),  -- A special truck that thaws
                                                  -- culverts and storm drains
-- Asset Status
unknown-status                          (10240),  -- Used when status is not known
ready-for-use                           (10241),
working-normally                        (10242),
working-autonomously                    (10243),
working-incorrectly                     (10244),
```

```
         not-working                    (10245),
         normal-maintenance            (10246),
         in-route-to-use               (10247),
         returning-from-use            (10248),
         out-of-service                (10249),
         off-duty                      (10250),
         on-patrol                     (10251),
         on-call                       (10252),
         on-break                      (10253),
         mandatory-time-off            (10254),
         low-on-fuel                   (10255),
         low-on-water                  (10256),
         low-charge                    (10257),
         missing                       (10258),  -- Use "sign down" in device
                                                 -- status if an object is damaged
                                                 -- (or use "damaged") and could
                                                 -- be returned to service, use
                                                 -- "missing" only if an object is
                                                 -- in fact missing

   -- Roadside Assets
   -- Inanimate Objects
         none                          (10496),  -- Implies free text follows
         light-pole                    (10497),
         utiltity-pole                 (10498),
         gantry-way                    (10499),
         sign-support                  (10500),  -- All forms of signage
         signal-pole                   (10501),
         signage-public                (10502),
         signage-private               (10503),
         overhead-sign                 (10568),  -- NEW: Do we want to keep this
                                                 -- one?
         ground-sign                   (10569),  -- NEW: Do we want to keep this
                                                 -- one?
         cones                         (10504),  -- Typical std height cones as
                                                 -- per MUTCD
         cones-post-type               (10505),  -- Also called channelizer cones
                                                 -- or delineator posts
         cones-glue-post               (10506),  -- For all glue-down types
         cones-other                   (10507),  -- Specialty types or misc.
                                                 -- smaller cones
         barriers                      (10508),
         barrier-Aframe                (10509),  -- Sizes larger than 1.5 meters
                                                 -- in length
         barriers-heavy-duty           (10510),  -- All types requiring equipment
                                                 -- to place
         barricade-type-III            (10511),  -- All collapsible Type III
                                                 -- Barricades
         barricade-small               (10512),  -- Type I and all small A frame
                                                 -- types, also so-called "mini"
                                                 -- or "narrows" types
         solid-barrier                 (10565),  -- NEW:  Added March 2005
         moveable-barrier              (10566),  -- NEW:  Added March 2005
         barricade-lights              (10513),  -- Std 7" light as per ITE stds
         beacon                        (10514),  -- All types of strobe and
                                                 -- rotating lights
         t-stand                       (10515),
         a-stand                       (10516),
         drums                         (10517),  -- Common drums and barrel types
         sand-barrel                   (10567),  -- NEW:  Added March 2005
         impact-attenuator             (10518),  -- Water-filled and other
                                                 -- crushable types
         barricade-tape                (10519),  -- Lettering type (legend) to be
                                                 -- conveyed elsewhere
         safety-fence                  (10520),
         temp-pavement-markings        (10521),  -- All forms of temp markings
         speed-bumps                   (10522),
         temp-curbs                    (10523),
         parking-blocks                (10524),
         signboard-fixed               (10525),
         signboard-portable            (10526),
   -- Controllable or Active Objects
         har                           (10527),  -- Transmission type not known
```

```
har-AM                                      (10528),
har-FM                                      (10529),
har-DSRC                                    (10530),
traffic-light                               (10531),
lane-control-signal                         (10532),
traffic-detector                            (10533),
vehicle-detector                            (10534),
system-alarm                                (10535),
arrow-board                                 (10536),
fixed-VMS                                   (10537),
mobile-VMS                                  (10538),
ramp-control                                (10539),
gate-control                                (10540),  -- Other than rail types
temporary-traffic-light                     (10541),
over-height-warning-system                  (10542),
over-weight-warning-system                  (10543),
emergency-telephones                        (10544),
railroad-crossing-equipment                 (10545),
tunnel-ventilation                          (10546),  -- Use also for fans
ccTV                                        (10547),
environmental-sensor                        (10548),
-- Items Used by Rail and Transit
switch                                      (10549),  -- In the context of a railroad
                                                      -- device
signal                                      (10550),  -- In the context of a railroad
                                                      -- device
third-rail                                  (10551),
overhead-power                              (10552),  -- Specifically the power feed
                                                      -- line for a vehicle, do not use
                                                      -- for general power lines
concrete-tie                                (10553),
wooden-tie                                  (10554),
-- Misc. Items
manhole-cover                               (10559),
escalator                                   (10555),
culvert                                     (10560),
elevator                                    (10556),
snow-poles                                  (10561),  -- A tall pole and overhanging
                                                      -- arm (like a luminaire) with
                                                      -- reflective markers to help
                                                      -- indicate roadway in mountain
                                                      -- passes during whiteout
                                                      -- conditions
track                                       (10557),
guide-poles                                 (10562),  -- Poles along road to indicate
                                                      -- guard rail in deep snow
drawbridge                                  (10558),
expansion-joint                             (10563),  -- NEW:  Added March 2005
shifted-plate                               (10564),  -- NEW:  Added March 2005
-- Transit Operations
unknown-transit-problem                     (10753),  -- NEW: Added March 2005
sleeping-customer                           (10754),  -- NEW: Added May 2005
assault-on-passenger                        (10755),  -- NEW: Added March 2005
assault-on-employee                         (10756),  -- NEW: Added May 2005
broken-seat                                 (10757),  -- NEW: Added March 2005
bus-alarm                                   (10758),  -- NEW: Added March 2005
crime-or-drug-deal                          (10759),  -- NEW: Added March 2005
eating-on-board                             (10760),  -- NEW: Added March 2005
equipment-problem-with-air-conditioning     (10761),  -- NEW: Added March 2005
equipment-problem-with-air-system           (10762),  -- NEW: Added March 2005
equipment-problem-with-brakes               (10763),  -- NEW: Added March 2005
equipment-problem-with-chassis-or-suspension (10764),  -- NEW: Added March 2005
equipment-problem-with-cooling-system       (10765),  -- NEW: Added March 2005
equipment-problem-with-doors                (10766),  -- NEW: Added March 2005
equipment-problem-with-electrical           (10767),  -- NEW: Added March 2005
equipment-problem-with-engine               (10768),  -- NEW: Added March 2005
equipment-problem-with-exterior-or-body     (10769),  -- NEW: Added March 2005
equipment-problem-with-fare-collection      (10770),  -- NEW: Added March 2005
equipment-problem-with-fuel-or-exhaust      (10771),  -- NEW: Added March 2005
equipment-problem-with-horn                 (10772),  -- NEW: Added March 2005
equipment-problem-with-interior             (10773),  -- NEW: Added March 2005
```

```
    equipment-problem-with-liftkneeling       (10774),   -- NEW: Added March 2005
    equipment-problem-with-lights             (10775),   -- NEW: Added March 2005
    equipment-problem-with-lubrication        (10776),   -- NEW: Added March 2005
    equipment-problem-with-radio-or-communication (10777),  -- NEW: Added March 2005
    equipment-problem-with-signs              (10778),   -- NEW: Added March 2005
    equipment-problem-with-steering           (10779),   -- NEW: Added March 2005
    equipment-problem-with-tires              (10780),   -- NEW: Added March 2005
    equipment-problem-with-transmission       (10781),   -- NEW: Added March 2005
    equipment-problem-with-unknown-alarm      (10782),   -- NEW: Added March 2005
    equipment-problem-with-wipers             (10783),   -- NEW: Added March 2005
    fare-dispute-expired-pass                 (10784),   -- NEW: Added March 2005
    fare-dispute-expired-transfer             (10785),   -- NEW: Added March 2005
    fare-dispute-expired-upgrade              (10786),   -- NEW: Added March 2005
    fare-dispute-other                        (10787),   -- NEW: Added March 2005
    fare-dispute-refuses-to-pay               (10788),   -- NEW: Added March 2005
    lift-passenger-cycle-completed            (10789),   -- NEW: Added March 2005
    lift-passenger-ready-to-alight            (10790),   -- NEW: Added March 2005
    lift-passenger-ready-to-board             (10791),   -- NEW: Added March 2005
    lost-article                              (10792),   -- NEW: Added March 2005
    objects-thrown                            (10793),   -- NEW: Added March 2005
    passenger-accident-alighting              (10794),   -- NEW: Added March 2005
    passenger-accident-boarding               (10795),   -- NEW: Added March 2005
    passenger-accident-fallen-on-board        (10796),   -- NEW: Added March 2005
    passenger-load                            (10797),   -- NEW: Added March 2005
    passenger-accident-other                  (10798),   -- NEW: Added March 2005
    passenger-sick-or-injured                 (10799),   -- NEW: Added March 2005
    right-of-way                              (10800),   -- NEW: Added March 2005
    theft                                     (10801),   -- NEW: Added March 2005
    theft-of-service                          (10802),   -- NEW: Added March 2005
    waiting-to-get-relief-for-schedule-break  (10803),   -- NEW: Added March 2005
    waiting-to-get-relief-after-run-is-finished (10804),  -- NEW: Added March 2005
    waiting-to-provide-relief                 (10805),   -- NEW: Added March 2005
    -- Objects
    unknown-object                            (11009),   -- NEW: Added March 2005
    tire                                      (11010),   -- NEW: Added March 2005
    rim                                       (11011),   -- NEW: Added March 2005
    retread                                   (11012),   -- NEW: Added March 2005
    trash                                     (11013),   -- NEW: Added March 2005
                                                         -- Consider using the
                                                         -- CleanUpItems of IEEE 1512 for
                                                         -- operational needs
    cargo                                     (11014),   -- NEW: Added March 2005
    diesel                                    (11015),   -- NEW: Added March 2005
    gasoline                                  (11016),   -- NEW: Added March 2005
    anti-freeze                               (11017),   -- NEW: Added March 2005
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```xml
<xs:simpleType name="ITIScodes">
    <xs:union memberTypes="TrafficConditions
    AccidentsAndIncidents
    Closures
    Roadwork Obstruction
    DelayStatusCancellation
    UnusualDriving
    MobileSituation
    DeviceStatus
    RestrictionClass
    IncidentResponseStatus
    Disasters
    Disturbances
    SportingEvents
    SpecialEvents
    ParkingInformation
    SystemInformation
    WeatherConditions
    Precipitation
    Winds
```

```
        VisibilityAndAirQuality
        Temperature
        PavementConditions
        WinterDrivingRestrictions
        WinterDrivingIndex
        SuggestionAdvice
        WarningAdvice
        AdviceInstructionsRecommendations
        AdviceInstructionsMandatory
        Qualifiers
        GenericLocations
        LaneRoadway
        AlternateRoute
        Units
        TransitMode
        VehicleGroupAffected
        TravelerGroupAffected
        ResponderGroupAffected
        IncidentResponseEquipment
        AssetStatus
        RoadsideAssets
        TransitOperations
        Objects"/>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS-Codes_And_Text <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.18 Data Element: DE_Lane / Roadway Descriptions

Use: The ITIS enumeration list commonly refered to as "Lane / Roadway Descriptions," is assigned the upper byte value of [32] (which provides for value ranges from 8192 to 8447, inclusive). This list is formally called "LaneRoadway" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 54 different phrases, divided into 5 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 73 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 8320).

ASN.1 Representation:
```
LaneRoadway ::= ENUMERATED  {
    -- Lanes
    all-roadways             (8193),   -- Used as the default value
    through-lanes            (8194),
    left-lane                (8195),
    right-lane               (8196),
    center-lane              (8197),
    middle-lanes             (8198),
    middle-two-lanes         (8199),
    right-turning-lanes      (8200),
    left-turning-lanes       (8201),
    upper-deck-lanes         (8236),   -- NEW: Added March 2005
    lower-deck-lanes         (8237),   -- NEW: Added March 2005
    reversible-lanes         (8238),   -- NEW: Added March 2005
    right-exit-lanes         (8239),   -- NEW: Added March 2005
    left-exit-lanes          (8240),   -- NEW: Added March 2005
    right-merging-lanes      (8241),   -- NEW: Added March 2005
    left-merging-lanes       (8242),   -- NEW: Added March 2005
    -- Ramps
    right-exit-ramp          (8202),
    right-second-exit-ramp   (8243),   -- NEW: Added March 2005
    right-entrance-ramp      (8203),
    right-second-entrance-ramp (8245), -- NEW: Added March 2005
    left-exit-ramp           (8204),
    left-second-exit-ramp    (8244),   -- NEW: Added March 2005
```

```
        left-entrance-ramp        (8205),
        left-second-entrance-ramp (8246),   -- NEW: Added March 2005
        escape-ramp               (8234),   -- A truck feature on steep downgrades common in
                                            -- both Alaska and elsewhere.
        -- Shoulders
        hard-shoulder             (8206),
        soft-shoulder             (8207),
        right-shoulder            (8208),
        left-shoulder             (8209),
        -- Other
        highways                  (8235),
        right-hand-parallel-lanes (8210),   -- Alternative Rendering:  right-hand frontage
                                            -- road
        left-hand-parallel-lanes  (8211),   -- Alternative Rendering:  left-hand frontage road
        connecting-lanes          (8212),
        express-lanes             (8213),
        local-lanes               (8214),
        toll-lanes                (8215),
        electronic-toll-lanes     (8216),
        toll-plaza                (8217),
        inspection-lane           (8218),   -- Alternative Rendering:  Border patrol
                                            -- inspection lane
        hOV-lanes                 (8219),
        bus-lanes                 (8220),
        carpool-lanes             (8221),
        truck-lanes               (8222),
        emergency-lanes           (8223),
        passing-lanes             (8224),
        climbing-lanes            (8225),
        slow-lane                 (8226),   -- Alternative Rendering:  Crawler lane
        service-road              (8227),   -- Alternative Rendering:  Frontage Road
        cycle-lane                (8228),
        -- Bridges, Tunnels
        bridge                    (8229),
        overpass                  (8230),
        elevated-lanes            (8231),
        underpass                 (8232),
        tunnel                    (8233),
        ... -- # LOCAL_CONTENT_ITIS
        }
```

XML Representation:
```xml
<xs:simpleType name="LaneRoadway" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="8192"/>
                <xs:maxInclusive value="8447"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="all roadways" id="_8193"/>
                <xs:enumeration value="through lanes" id="_8194"/>
                <xs:enumeration value="left lane" id="_8195"/>
                <xs:enumeration value="right lane" id="_8196"/>
                <xs:enumeration value="center lane" id="_8197"/>
                <xs:enumeration value="middle lanes" id="_8198"/>
                <xs:enumeration value="middle two lanes" id="_8199"/>
                <xs:enumeration value="right turning lanes" id="_8200"/>
                <xs:enumeration value="left turning lanes" id="_8201"/>
                <xs:enumeration value="upper deck lanes" id="_8236"/>
                <xs:enumeration value="lower deck lanes" id="_8237"/>
                <xs:enumeration value="reversible lanes" id="_8238"/>
                <xs:enumeration value="right exit lanes" id="_8239"/>
                <xs:enumeration value="left exit lanes" id="_8240"/>
                <xs:enumeration value="right merging lanes" id="_8241"/>
                <xs:enumeration value="left merging lanes" id="_8242"/>
                <xs:enumeration value="right exit ramp" id="_8202"/>
                <xs:enumeration value="right second exit ramp" id="_8243"/>
                <xs:enumeration value="right entrance ramp" id="_8203"/>
```

```
                <xs:enumeration value="right second entrance ramp" id="_8245"/>
                <xs:enumeration value="left exit ramp" id="_8204"/>
                <xs:enumeration value="left second exit ramp" id="_8244"/>
                <xs:enumeration value="left entrance ramp" id="_8205"/>
                <xs:enumeration value="left second entrance ramp" id="_8246"/>
                <xs:enumeration value="escape ramp" id="_8234"/>
                <xs:enumeration value="hard shoulder" id="_8206"/>
                <xs:enumeration value="soft shoulder" id="_8207"/>
                <xs:enumeration value="right shoulder" id="_8208"/>
                <xs:enumeration value="left shoulder" id="_8209"/>
                <xs:enumeration value="highways" id="_8235"/>
                <xs:enumeration value="right hand parallel lanes" id="_8210"/>
                <xs:enumeration value="left hand parallel lanes" id="_8211"/>
                <xs:enumeration value="connecting lanes" id="_8212"/>
                <xs:enumeration value="express lanes" id="_8213"/>
                <xs:enumeration value="local lanes" id="_8214"/>
                <xs:enumeration value="toll lanes" id="_8215"/>
                <xs:enumeration value="electronic toll lanes" id="_8216"/>
                <xs:enumeration value="toll plaza" id="_8217"/>
                <xs:enumeration value="inspection lane" id="_8218"/>
                <xs:enumeration value="hOV lanes" id="_8219"/>
                <xs:enumeration value="bus lanes" id="_8220"/>
                <xs:enumeration value="carpool lanes" id="_8221"/>
                <xs:enumeration value="truck lanes" id="_8222"/>
                <xs:enumeration value="emergency lanes" id="_8223"/>
                <xs:enumeration value="passing lanes" id="_8224"/>
                <xs:enumeration value="climbing lanes" id="_8225"/>
                <xs:enumeration value="slow lane" id="_8226"/>
                <xs:enumeration value="service road" id="_8227"/>
                <xs:enumeration value="cycle lane" id="_8228"/>
                <xs:enumeration value="bridge" id="_8229"/>
                <xs:enumeration value="overpass" id="_8230"/>
                <xs:enumeration value="elevated lanes" id="_8231"/>
                <xs:enumeration value="underpass" id="_8232"/>
                <xs:enumeration value="tunnel" id="_8233"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:LaneRoadway" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.19 Data Element: DE_Mobile Situation

Use: The ITIS enumeration list commonly refered to as "Mobile Situation," is assigned the upper byte value of [08] (which provides for value ranges from 2048 to 2303, inclusive). This list is formally called "MobileSituation" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 22 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 105 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 2176).

ASN.1 Representation:

```
MobileSituation ::= ENUMERATED  {
    abnormal-load                                    (2049),
    wide-load                                        (2050),
    long-load                                        (2051),
    slow-vehicle                                     (2052),
    farm-equipment                                   (2053),
    horse-drawn-vehicles                             (2054),
    overheight-load                                  (2055),
    overweight-load                                  (2056),
    tracked-vehicle                                  (2057),
    vehicle-carrying-hazardous-materials             (2058),
    slow-moving-maintenance-vehicle                  (2059),   -- Hint: mowing, line
                                                               -- stripping, sweepers, etc.
    convoy                                           (2060),
    military-convoy                                  (2061),
    refugee-convoy                                   (2062),
    motorcade                                        (2063),
    mobile-situation-repositioning                   (2064),
    winter-maintenance-vehicles                      (2065),
    snowplows                                        (2066),
    -- Cancel Types
    slow-moving-maintenance-vehicle-warning-cleared (2172),
    exceptional-load-warning-cleared                 (2173),
    hazardous-load-warning-cleared                   (2174),
    convoy-cleared                                   (2175),
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- Used for events which are mobile along the network
```

XML Representation:

```
<xs:simpleType name="MobileSituation" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="2048"/>
                <xs:maxInclusive value="2303"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="abnormal load" id="_2049"/>
                <xs:enumeration value="wide load" id="_2050"/>
                <xs:enumeration value="long load" id="_2051"/>
                <xs:enumeration value="slow vehicle" id="_2052"/>
                <xs:enumeration value="farm equipment" id="_2053"/>
                <xs:enumeration value="horse drawn vehicles" id="_2054"/>
                <xs:enumeration value="overheight load" id="_2055"/>
                <xs:enumeration value="overweight load" id="_2056"/>
                <xs:enumeration value="tracked vehicle" id="_2057"/>
                <xs:enumeration value="vehicle carrying hazardous materials" id="_2058"/>
                <xs:enumeration value="slow moving maintenance vehicle" id="_2059"/>
                <xs:enumeration value="convoy" id="_2060"/>
                <xs:enumeration value="military convoy" id="_2061"/>
                <xs:enumeration value="refugee convoy" id="_2062"/>
                <xs:enumeration value="motorcade" id="_2063"/>
                <xs:enumeration value="mobile situation repositioning" id="_2064"/>
                <xs:enumeration value="winter maintenance vehicles" id="_2065"/>
                <xs:enumeration value="snowplows" id="_2066"/>
                <xs:enumeration value="slow moving maintenance vehicle warning cleared" id="_2172"/>
                <xs:enumeration value="exceptional load warning cleared" id="_2173"/>
                <xs:enumeration value="hazardous load warning cleared" id="_2174"/>
                <xs:enumeration value="convoy cleared" id="_2175"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
```

```
            <xs:simpleType>
                <xs:restriction base="local:MobileSituation" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.20 Data Element: DE_Objects

Use: The ITIS enumeration list commonly refered to as "Objects," is assigned the upper byte value of [43] (which provides for value ranges from 11008 to 11263, inclusive). This list is formally called "Objects" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 9 different phrases. The remaining 118 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 11136).

ASN.1 Representation:
```
Objects ::= ENUMERATED  {
    unknown-object (11009),  -- NEW: Added March 2005
    tire           (11010),  -- NEW: Added March 2005
    rim            (11011),  -- NEW: Added March 2005
    retread        (11012),  -- NEW: Added March 2005
    trash          (11013),  -- NEW: Added March 2005  Consider using the CleanUpItems of
                             -- IEEE 1512 for operational needs
    cargo          (11014),  -- NEW: Added March 2005
    diesel         (11015),  -- NEW: Added March 2005
    gasoline       (11016),  -- NEW: Added March 2005
    anti-freeze    (11017),  -- NEW: Added March 2005
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="Objects" >
    <xs:union>
      <xs:simpleType>
         <xs:restriction base="xs:unsignedInt">
            <xs:minInclusive value="11008"/>
            <xs:maxInclusive value="11263"/>
         </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
         <xs:restriction base="xs:string">
            <xs:enumeration value="unknown object" id="_11009"/>
            <xs:enumeration value="tire" id="_11010"/>
            <xs:enumeration value="rim" id="_11011"/>
            <xs:enumeration value="retread" id="_11012"/>
            <xs:enumeration value="trash" id="_11013"/>
            <xs:enumeration value="cargo" id="_11014"/>
            <xs:enumeration value="diesel" id="_11015"/>
            <xs:enumeration value="gasoline" id="_11016"/>
            <xs:enumeration value="anti freeze" id="_11017"/>
         </xs:restriction>
      </xs:simpleType >
      <xs:simpleType>
         <xs:restriction base="xs:string">
            <xs:pattern value="\[.+\].*"/>
         </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
         <xs:restriction base="local:Objects" />
      </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.21 Data Element: DE_Obstructions

Use: The ITIS enumeration list commonly refered to as "Obstructions," is assigned the upper byte value of [05] (which provides for value ranges from 1280 to 1535, inclusive). This list is formally called "Obstruction" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 40 different phrases, divided into 5 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 87 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 1408).

ASN.1 Representation:

```
Obstruction ::= ENUMERATED  {
    -- General
    obstruction-on-roadway          (1281),
    object-on-roadway               (1282),
    objects-falling-from-moving-vehicle (1283),
    debris-on-roadway               (1284),
    storm-damage                    (1285),
    -- People
    people-on-roadway               (1286),
    bicyclists-on-roadway           (1287),
    sightseers-obstructing-access   (1288),
    large-numbers-of-visitors       (1289),
    -- Animals
    animal-on-roadway               (1290),
    large-animal-on-roadway         (1291),
    herd-of-animals-on-roadway      (1292),
    animal-struck                   (1293),
    -- Specific Items
    advertising-signs               (1315),  -- Used for illegal signage as well
    fallen-trees                    (1294),
    over-turned-trees               (1311),
    tree-limbs                      (1312),
    utility-pole-down               (1314),
    downed-power-lines              (1295),  -- Alternative Rendering:  fallen power
                                             -- lines
    downed-cables                   (1296),  -- Alternative Rendering:  fallen cables
    subsidence                      (1297),  -- Alternative Rendering: road collapse
    road-surface-collapse           (1298),
    frost-jacking                   (1317),  -- A unique Alaska problem caused by
                                             -- culverts or other features jacking out
                                             -- of ground due to freezing
    frost-heave                     (1316),  -- A large standing wave of soil under
                                             -- pavement due to frost action
    pavement-buckled                (1299),
    pothole                         (1300),
    flooding                        (1301),
    broken-water-main               (1302),
    collapsed-sewer                 (1303),
    wash-out                        (1319),  -- What can happen to roads
    washboard                       (1318),  -- A term for rough road or unpaved roads
    sewer-overflow                  (1304),
    gas-leak                        (1305),
    snowmelt                        (1306),  -- Hint: Typically used as a cause
    mudslide                        (1307),
    avalanche                       (1308),  -- Possibly a disaster as well
    rockfall                        (1309),
    landslide                       (1310),
    -- Cancel Types
    clearance-work                  (1406),
    obstruction-cleared             (1407),
```

```
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- note singular spelling
```

XML Representation:

```
<xs:simpleType name="Obstruction" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="1280"/>
              <xs:maxInclusive value="1535"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="obstruction on roadway" id="_1281"/>
              <xs:enumeration value="object on roadway" id="_1282"/>
              <xs:enumeration value="objects falling from moving vehicle" id="_1283"/>
              <xs:enumeration value="debris on roadway" id="_1284"/>
              <xs:enumeration value="storm damage" id="_1285"/>
              <xs:enumeration value="people on roadway" id="_1286"/>
              <xs:enumeration value="bicyclists on roadway" id="_1287"/>
              <xs:enumeration value="sightseers obstructing access" id="_1288"/>
              <xs:enumeration value="large numbers of visitors" id="_1289"/>
              <xs:enumeration value="animal on roadway" id="_1290"/>
              <xs:enumeration value="large animal on roadway" id="_1291"/>
              <xs:enumeration value="herd of animals on roadway" id="_1292"/>
              <xs:enumeration value="animal struck" id="_1293"/>
              <xs:enumeration value="advertising signs" id="_1315"/>
              <xs:enumeration value="fallen trees" id="_1294"/>
              <xs:enumeration value="over turned trees" id="_1311"/>
              <xs:enumeration value="tree limbs" id="_1312"/>
              <xs:enumeration value="utility pole down" id="_1314"/>
              <xs:enumeration value="downed power lines" id="_1295"/>
              <xs:enumeration value="downed cables" id="_1296"/>
              <xs:enumeration value="subsidence" id="_1297"/>
              <xs:enumeration value="road surface collapse" id="_1298"/>
              <xs:enumeration value="frost jacking" id="_1317"/>
              <xs:enumeration value="frost heave" id="_1316"/>
              <xs:enumeration value="pavement buckled" id="_1299"/>
              <xs:enumeration value="pothole" id="_1300"/>
              <xs:enumeration value="flooding" id="_1301"/>
              <xs:enumeration value="broken water main" id="_1302"/>
              <xs:enumeration value="collapsed sewer" id="_1303"/>
              <xs:enumeration value="wash out" id="_1319"/>
              <xs:enumeration value="washboard" id="_1318"/>
              <xs:enumeration value="sewer overflow" id="_1304"/>
              <xs:enumeration value="gas leak" id="_1305"/>
              <xs:enumeration value="snowmelt" id="_1306"/>
              <xs:enumeration value="mudslide" id="_1307"/>
              <xs:enumeration value="avalanche" id="_1308"/>
              <xs:enumeration value="rockfall" id="_1309"/>
              <xs:enumeration value="landslide" id="_1310"/>
              <xs:enumeration value="clearance work" id="_1406"/>
              <xs:enumeration value="obstruction cleared" id="_1407"/>
           </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="local:Obstruction" />
        </xs:simpleType>
     </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.22 Data Element: DE_Parking Information

Use: The ITIS enumeration list commonly refered to as "Parking Information," is assigned the upper byte value of [16] (which provides for value ranges from 4096 to 4351, inclusive). This list is formally called "ParkingInformation" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 23 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 104 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 4224).

ASN.1 Representation:
```
ParkingInformation ::= ENUMERATED  {
   normal-parking-restrictions-lifted    (4097),  -- Hint: used when a PARKING
                                                  -- restriction is lifted (overnight
                                                  -- parking allowed during event)  Not
                                                  -- to be used as a default for this
                                                  -- category
   parking-meter-restrictions-lifted     (4098),  -- Hint: used when a METER restriction
                                                  -- is lifted (metered parking free
                                                  -- during event)
   special-parking-restrictions-in-force (4099),
   full-parking-lot                      (4100),
   full-parking-garage                   (4101),
   all-parking-lots-full                 (4102),
   no-parking-spaces-available           (4103),
   only-a-few-spaces-available           (4104),
   spaces-available                      (4105),  -- Typically preceded by a # value
   no-parking                            (4106),
   parking-on-one-side-of-street-only    (4107),
   parking-on-both-sides-of-street       (4108),
   parallel-parking-only                 (4109),
   parking-meters-not-available          (4110),
   use-of-parking-meters-restricted      (4111),
   event-parking                         (4112),
   handicapped-parking                   (4113),
   long-term-parking                     (4114),
   overnight-parking                     (4115),
   short-term-parking                    (4116),
   parking-by-permit-only                (4117),  -- NEW: Added March 2005
   -- Cancel Types
   special-parking-restrictions-lifted   (4222),
   no-parking-information-available      (4223),
   ... -- # LOCAL_CONTENT ITIS
   }
```

XML Representation:
```
<xs:simpleType name="ParkingInformation" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="4096"/>
              <xs:maxInclusive value="4351"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="normal parking restrictions lifted" id="_4097"/>
              <xs:enumeration value="parking meter restrictions lifted" id="_4098"/>
              <xs:enumeration value="special parking restrictions in force" id="_4099"/>
              <xs:enumeration value="full parking lot" id="_4100"/>
              <xs:enumeration value="full parking garage" id="_4101"/>
              <xs:enumeration value="all parking lots full" id="_4102"/>
              <xs:enumeration value="no parking spaces available" id="_4103"/>
```

```
                    <xs:enumeration value="only a few spaces available" id="_4104"/>
                    <xs:enumeration value="spaces available" id="_4105"/>
                    <xs:enumeration value="no parking" id="_4106"/>
                    <xs:enumeration value="parking on one side of street only" id="_4107"/>
                    <xs:enumeration value="parking on both sides of street" id="_4108"/>
                    <xs:enumeration value="parallel parking only" id="_4109"/>
                    <xs:enumeration value="parking meters not available" id="_4110"/>
                    <xs:enumeration value="use of parking meters restricted" id="_4111"/>
                    <xs:enumeration value="event parking" id="_4112"/>
                    <xs:enumeration value="handicapped parking" id="_4113"/>
                    <xs:enumeration value="long term parking" id="_4114"/>
                    <xs:enumeration value="overnight parking" id="_4115"/>
                    <xs:enumeration value="short term parking" id="_4116"/>
                    <xs:enumeration value="parking by permit only" id="_4117"/>
                    <xs:enumeration value="special parking restrictions lifted" id="_4222"/>
                    <xs:enumeration value="no parking information available" id="_4223"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:ParkingInformation" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.23 Data Element: DE_Pavement Conditions

Use: The ITIS enumeration list commonly refered to as "Pavement Conditions," is assigned the upper byte value of [23] (which provides for value ranges from 5888 to 6143, inclusive). This list is formally called "PavementConditions" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 47 different phrases, divided into 4 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 80 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 6016).

ASN.1 Representation:
```
PavementConditions ::= ENUMERATED {
    -- General
    impassable                   (5889),
    almost-impassable            (5890),
    passable-with-care           (5891),
    passable                     (5892),
    surface-water-hazard         (5893),
    danger-of-hydroplaning       (5894),
    wet-pavement                 (5895),
    treated-pavement             (5896),   -- Alternative Rendering:  chemical wet
    slippery                     (5897),
    -- On Roadway items
    mud-on-roadway               (5898),
    leaves-on-roadway            (5899),
    loose-sand-on-roadway        (5900),
    loose-gravel                 (5901),
    fuel-on-roadway              (5902),
    oil-on-roadway               (5903),
    road-surface-in-poor-condition (5904),
    melting-tar                  (5905),
    -- Ice & Snow
    ice                          (5906),
```

```
    icy-patches                    (5907),
    black-ice                      (5908),
    ice-pellets-on-roadway         (5909),
    ice-build-up                   (5910),
    freezing-rain                  (5911),
    wet-and-icy-roads              (5912),
    melting-snow                   (5913),
    slush                          (5914),
    frozen-slush                   (5915),
    snow-on-roadway                (5916),
    packed-snow                    (5917),
    packed-snow-patches            (5918),
    plowed-snow                    (5919),
    wet-snow                       (5920),
    fresh-snow                     (5921),
    powder-snow                    (5922),
    granular-snow                  (5923),
    frozen-snow                    (5924),
    crusted-snow                   (5925),
    deep-snow                      (5926),
    snow-drifts                    (5927),
    drifting-snow                  (5928),
    expected-snow-accumulation     (5929),
    current-snow-accumulation      (5930),
    -- Cancel Types
    dry-pavement                   (6011),
    snow-cleared                   (6012),
    pavement-conditions-improved   (6013),
    skid-hazard-reduced            (6014),
    pavement-conditions-cleared    (6015),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```xml
<xs:simpleType name="PavementConditions" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="5888"/>
              <xs:maxInclusive value="6143"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="impassable" id="_5889"/>
              <xs:enumeration value="almost impassable" id="_5890"/>
              <xs:enumeration value="passable with care" id="_5891"/>
              <xs:enumeration value="passable" id="_5892"/>
              <xs:enumeration value="surface water hazard" id="_5893"/>
              <xs:enumeration value="danger of hydroplaning" id="_5894"/>
              <xs:enumeration value="wet pavement" id="_5895"/>
              <xs:enumeration value="treated pavement" id="_5896"/>
              <xs:enumeration value="slippery" id="_5897"/>
              <xs:enumeration value="mud on roadway" id="_5898"/>
              <xs:enumeration value="leaves on roadway" id="_5899"/>
              <xs:enumeration value="loose sand on roadway" id="_5900"/>
              <xs:enumeration value="loose gravel" id="_5901"/>
              <xs:enumeration value="fuel on roadway" id="_5902"/>
              <xs:enumeration value="oil on roadway" id="_5903"/>
              <xs:enumeration value="road surface in poor condition" id="_5904"/>
              <xs:enumeration value="melting tar" id="_5905"/>
              <xs:enumeration value="ice" id="_5906"/>
              <xs:enumeration value="icy patches" id="_5907"/>
              <xs:enumeration value="black ice" id="_5908"/>
              <xs:enumeration value="ice pellets on roadway" id="_5909"/>
              <xs:enumeration value="ice build up" id="_5910"/>
              <xs:enumeration value="freezing rain" id="_5911"/>
              <xs:enumeration value="wet and icy roads" id="_5912"/>
              <xs:enumeration value="melting snow" id="_5913"/>
              <xs:enumeration value="slush" id="_5914"/>
              <xs:enumeration value="frozen slush" id="_5915"/>
```

```
                    <xs:enumeration value="snow on roadway" id="_5916"/>
                    <xs:enumeration value="packed snow" id="_5917"/>
                    <xs:enumeration value="packed snow patches" id="_5918"/>
                    <xs:enumeration value="plowed snow" id="_5919"/>
                    <xs:enumeration value="wet snow" id="_5920"/>
                    <xs:enumeration value="fresh snow" id="_5921"/>
                    <xs:enumeration value="powder snow" id="_5922"/>
                    <xs:enumeration value="granular snow" id="_5923"/>
                    <xs:enumeration value="frozen snow" id="_5924"/>
                    <xs:enumeration value="crusted snow" id="_5925"/>
                    <xs:enumeration value="deep snow" id="_5926"/>
                    <xs:enumeration value="snow drifts" id="_5927"/>
                    <xs:enumeration value="drifting snow" id="_5928"/>
                    <xs:enumeration value="expected snow accumulation" id="_5929"/>
                    <xs:enumeration value="current snow accumulation" id="_5930"/>
                    <xs:enumeration value="dry pavement" id="_6011"/>
                    <xs:enumeration value="snow cleared" id="_6012"/>
                    <xs:enumeration value="pavement conditions improved" id="_6013"/>
                    <xs:enumeration value="skid hazard reduced" id="_6014"/>
                    <xs:enumeration value="pavement conditions cleared" id="_6015"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:PavementConditions" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called <u>DF_ITIS_EventType</u> <u><ASN></u> <u><XML></u>. In addition, this item may be used by data structures in other ITS standards.

6.24 Data Element: DE_Precipitation

Use: The ITIS enumeration list commonly refered to as "Precipitation," is assigned the upper byte value of [19] (which provides for value ranges from 4864 to 5119, inclusive). This list is formally called "Precipitation" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 26 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 101 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 4992).

ASN.1 Representation:
```
Precipitation ::= ENUMERATED  {
    severe-weather         (4865),
    blizzard               (4866),
    heavy-snow             (4867),
    snow                   (4868),
    light-snow             (4869),
    snow-showers           (4870),
    winter-storm           (4871),
    ice-glaze              (4872),
    heavy-frost            (4873),
    frost                  (4874),
    ice-storm              (4875),
    sleet                  (4876),
    rain-and-snow-mixed    (4877),
    rain-changing-to-snow  (4878),
    damaging-hail          (4879),
    hail                   (4880),
    thunderstorms          (4881),
    thundershowers         (4882),
```

```
    extremely-heavy-downpour (4883),
    heavy-rain               (4884),
    rain                     (4885),
    light-rain               (4886),
    drizzle                  (4887),
    showers                  (4888),
    dew                      (4889),
    -- Cancel Types
    precipitation-cleared    (4991),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```xml
<xs:simpleType name="Precipitation" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="4864"/>
                <xs:maxInclusive value="5119"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="severe weather" id="_4865"/>
                <xs:enumeration value="blizzard" id="_4866"/>
                <xs:enumeration value="heavy snow" id="_4867"/>
                <xs:enumeration value="snow" id="_4868"/>
                <xs:enumeration value="light snow" id="_4869"/>
                <xs:enumeration value="snow showers" id="_4870"/>
                <xs:enumeration value="winter storm" id="_4871"/>
                <xs:enumeration value="ice glaze" id="_4872"/>
                <xs:enumeration value="heavy frost" id="_4873"/>
                <xs:enumeration value="frost" id="_4874"/>
                <xs:enumeration value="ice storm" id="_4875"/>
                <xs:enumeration value="sleet" id="_4876"/>
                <xs:enumeration value="rain and snow mixed" id="_4877"/>
                <xs:enumeration value="rain changing to snow" id="_4878"/>
                <xs:enumeration value="damaging hail" id="_4879"/>
                <xs:enumeration value="hail" id="_4880"/>
                <xs:enumeration value="thunderstorms" id="_4881"/>
                <xs:enumeration value="thundershowers" id="_4882"/>
                <xs:enumeration value="extremely heavy downpour" id="_4883"/>
                <xs:enumeration value="heavy rain" id="_4884"/>
                <xs:enumeration value="rain" id="_4885"/>
                <xs:enumeration value="light rain" id="_4886"/>
                <xs:enumeration value="drizzle" id="_4887"/>
                <xs:enumeration value="showers" id="_4888"/>
                <xs:enumeration value="dew" id="_4889"/>
                <xs:enumeration value="precipitation cleared" id="_4991"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:Precipitation" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.25 Data Element: DE_Qualifiers

Use: The ITIS enumeration list commonly refered to as "Qualifiers," is assigned the upper byte value of [30] (which provides for value ranges from 7680 to 7935, inclusive). This list is formally called "Qualifiers" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 54 different phrases, divided into 5 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 73 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 7808).

ASN.1 Representation:
```
Qualifiers ::= ENUMERATED  {
    -- Locations
    above               (7681),  -- Not to be used as the default for this category
    below               (7682),
    in                  (7683),
    around              (7684),
    after               (7685),
    before              (7686),
    at                  (7687),  -- Hint: used in conjunction with generic locations
    on                  (7688),  -- Hint: used in conjunction with "roadway" or other
                                 -- terms
    near                (7689),  -- Hint: used with generic locations and lanes
    from-the            (7690),
    terminal            (7691),
    -- Weather Related
    falling-slowly      (7692),
    falling             (7693),
    falling-quickly     (7694),
    rising-slowly       (7695),
    rising              (7696),
    rising-quickly      (7697),
    steady              (7698),
    likely              (7699),
    changing-to         (7700),
    mostly              (7701),
    partly              (7702),
    minus               (7703),
    weather-ended       (7704),
    expected            (7705),
    low                 (7706),  -- Typically used in temperatures. See also "upper"
    mid                 (7707),
    high                (7708),
    upper               (7709),  -- Typically used in temperatures. See also "low"
    unseasonably        (7710),
    reported            (7711),
    -- Instructions
    advice              (7712),
    due-to              (7713),
    proceed-to          (7714),
    transferred-to      (7715),
    use                 (7716),
    -- Prepositional Use
    affecting           (7717),
    blocking            (7718),
    connecting          (7719),
    finished            (7720),
    for                 (7721),
    or                  (7722),
    -- Other
    and                 (7723),
    later               (7724),
    level               (7725),
    shortly             (7726),
```

```
soon                    (7727),
service                 (7728),
graffiti                (7733),
damaged                 (7729),
out-of-order            (7730),
on-State-right-of-way (7732),
found-property        (7734),
vandalism               (7731),
... -- # LOCAL_CONTENT_ITIS
}
-- Modifiers and parts of sentences
```

XML Representation:

```xml
<xs:simpleType name="Qualifiers" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="7680"/>
                <xs:maxInclusive value="7935"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="above" id="_7681"/>
                <xs:enumeration value="below" id="_7682"/>
                <xs:enumeration value="in" id="_7683"/>
                <xs:enumeration value="around" id="_7684"/>
                <xs:enumeration value="after" id="_7685"/>
                <xs:enumeration value="before" id="_7686"/>
                <xs:enumeration value="at" id="_7687"/>
                <xs:enumeration value="on" id="_7688"/>
                <xs:enumeration value="near" id="_7689"/>
                <xs:enumeration value="from the" id="_7690"/>
                <xs:enumeration value="terminal" id="_7691"/>
                <xs:enumeration value="falling slowly" id="_7692"/>
                <xs:enumeration value="falling" id="_7693"/>
                <xs:enumeration value="falling quickly" id="_7694"/>
                <xs:enumeration value="rising slowly" id="_7695"/>
                <xs:enumeration value="rising" id="_7696"/>
                <xs:enumeration value="rising quickly" id="_7697"/>
                <xs:enumeration value="steady" id="_7698"/>
                <xs:enumeration value="likely" id="_7699"/>
                <xs:enumeration value="changing to" id="_7700"/>
                <xs:enumeration value="mostly" id="_7701"/>
                <xs:enumeration value="partly" id="_7702"/>
                <xs:enumeration value="minus" id="_7703"/>
                <xs:enumeration value="weather ended" id="_7704"/>
                <xs:enumeration value="expected" id="_7705"/>
                <xs:enumeration value="low" id="_7706"/>
                <xs:enumeration value="mid" id="_7707"/>
                <xs:enumeration value="high" id="_7708"/>
                <xs:enumeration value="upper" id="_7709"/>
                <xs:enumeration value="unseasonably" id="_7710"/>
                <xs:enumeration value="reported" id="_7711"/>
                <xs:enumeration value="advice" id="_7712"/>
                <xs:enumeration value="due to" id="_7713"/>
                <xs:enumeration value="proceed to" id="_7714"/>
                <xs:enumeration value="transferred to" id="_7715"/>
                <xs:enumeration value="use" id="_7716"/>
                <xs:enumeration value="affecting" id="_7717"/>
                <xs:enumeration value="blocking" id="_7718"/>
                <xs:enumeration value="connecting" id="_7719"/>
                <xs:enumeration value="finished" id="_7720"/>
                <xs:enumeration value="for" id="_7721"/>
                <xs:enumeration value="or" id="_7722"/>
                <xs:enumeration value="and" id="_7723"/>
                <xs:enumeration value="later" id="_7724"/>
                <xs:enumeration value="level" id="_7725"/>
                <xs:enumeration value="shortly" id="_7726"/>
                <xs:enumeration value="soon" id="_7727"/>
                <xs:enumeration value="service" id="_7728"/>
```

```
                <xs:enumeration value="graffiti" id="_7733"/>
                <xs:enumeration value="damaged" id="_7729"/>
                <xs:enumeration value="out of order" id="_7730"/>
                <xs:enumeration value="on State right of way" id="_7732"/>
                <xs:enumeration value="found property" id="_7734"/>
                <xs:enumeration value="vandalism" id="_7731"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:Qualifiers" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.26 Data Element: DE_Responder Group Affected

Use: The ITIS enumeration list commonly refered to as "Responder Group Affected," is assigned the upper byte value of [38] (which provides for value ranges from 9728 to 9983, inclusive). This list is formally called "ResponderGroupAffected" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 14 different phrases. The remaining 113 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 9856).

ASN.1 Representation:
```
ResponderGroupAffected ::= ENUMERATED  {
    emergency-vehicle-units        (9729),   -- Default phrase, to be used when one of
                                             -- the below does not fit better
    federal-law-enforcement-units  (9730),
    state-police-units             (9731),
    county-police-units            (9732),   -- Hint: also sheriff response units
    local-police-units             (9733),
    ambulance-units                (9734),
    rescue-units                   (9735),
    fire-units                     (9736),
    hAZMAT-units                   (9737),
    light-tow-unit                 (9738),
    heavy-tow-unit                 (9739),
    freeway-service-patrols        (9740),
    transportation-response-units       (9741),   -- NEW: Added March 2005
    private-contractor-response-units (9742),  -- NEW: Added March 2005
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- These groups are used in coordinated response and staging area information
    -- (rather than typically consumer related)
```

XML Representation:
```
<xs:simpleType name="ResponderGroupAffected" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="9728"/>
                <xs:maxInclusive value="9983"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="emergency vehicle units" id="_9729"/>
                <xs:enumeration value="federal law enforcement units" id="_9730"/>
                <xs:enumeration value="state police units" id="_9731"/>
```

```
                    <xs:enumeration value="county police units" id="_9732"/>
                    <xs:enumeration value="local police units" id="_9733"/>
                    <xs:enumeration value="ambulance units" id="_9734"/>
                    <xs:enumeration value="rescue units" id="_9735"/>
                    <xs:enumeration value="fire units" id="_9736"/>
                    <xs:enumeration value="hAZMAT units" id="_9737"/>
                    <xs:enumeration value="light tow unit" id="_9738"/>
                    <xs:enumeration value="heavy tow unit" id="_9739"/>
                    <xs:enumeration value="freeway service patrols" id="_9740"/>
                    <xs:enumeration value="transportation response units" id="_9741"/>
                    <xs:enumeration value="private contractor response units" id="_9742"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:ResponderGroupAffected" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.27 Data Element: DE_Restrictions

Use: The ITIS enumeration list commonly refered to as "Restrictions," is assigned the upper byte value of [10] (which provides for value ranges from 2560 to 2815, inclusive). This list is formally called "RestrictionClass" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 40 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 87 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 2688).

ASN.1 Representation:
```
RestrictionClass ::= ENUMERATED   {
    restrictions                               (2561),
    ramp-restrictions                          (2562),
    truck-restriction                          (2563),
    speed-restriction                          (2564),
    noise-restriction                          (2565),
    traffic-regulations-have-been-changed      (2566),
    local-access-only                          (2567),
    no-trailers                                (2568),
    no-high-profile-vehicles                   (2569),
    hazardous-materials-truck-restriction      (2570),
    no-through-traffic                         (2571),
    no-motor-vehicles                          (2572),
    width-limit                                (2573),  -- Typically followed by a
                                                        -- number and unit value
    height-limit                               (2574),  -- Typically followed by a
                                                        -- number and unit value
    length-limit                               (2575),  -- Typically followed by a
                                                        -- number and unit value
    axle-load-limit                            (2576),  -- Typically followed by a
                                                        -- number and unit value
    gross-weight-limit                         (2577),  -- Typically followed by a
                                                        -- number and unit value
    axle-count-limit                           (2578),  -- Typically followed by a
                                                        -- number and unit value
    carpool-lane-available                     (2579),
    carpool-restrictions-changed               (2580),
    hOV-2-no-single-occupant-vehicles          (2581),
```

```
hOV-3-no-vehicles-with-less-than-three-occupants (2582),
bus-lane-available-for-all-vehicles              (2583),
truck-lane-available-for-all-vehicles            (2584),
permits-call-in-basis                            (2585),
permits-temporarily-closed                       (2586),
permits-closed                                   (2587),
-- Cancel Types
permits-open                                     (2675),
restrictions-for-high-profile-vehicles-lifted    (2676),
width-limit-lifted                               (2677),
height-limit-lifted                              (2678),
length-limit-lifted                              (2679),
axle-load-limit-lifted                           (2680),
weight-limit-lifted                              (2681),
axle-count-limit-lifted                          (2682),
carpool-restrictions-lifted                      (2683),
lane-restrictions-lifted                         (2684),
ramp-restrictions-lifted                         (2685),
motor-vehicle-restrictions-lifted                (2686),
restrictions-lifted                              (2687),
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:
```xml
<xs:simpleType name="RestrictionClass" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="2560"/>
                <xs:maxInclusive value="2815"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="restrictions" id="_2561"/>
                <xs:enumeration value="ramp restrictions" id="_2562"/>
                <xs:enumeration value="truck restriction" id="_2563"/>
                <xs:enumeration value="speed restriction" id="_2564"/>
                <xs:enumeration value="noise restriction" id="_2565"/>
                <xs:enumeration value="traffic regulations have been changed" id="_2566"/>
                <xs:enumeration value="local access only" id="_2567"/>
                <xs:enumeration value="no trailers" id="_2568"/>
                <xs:enumeration value="no high profile vehicles" id="_2569"/>
                <xs:enumeration value="hazardous materials truck restriction" id="_2570"/>
                <xs:enumeration value="no through traffic" id="_2571"/>
                <xs:enumeration value="no motor vehicles" id="_2572"/>
                <xs:enumeration value="width limit" id="_2573"/>
                <xs:enumeration value="height limit" id="_2574"/>
                <xs:enumeration value="length limit" id="_2575"/>
                <xs:enumeration value="axle load limit" id="_2576"/>
                <xs:enumeration value="gross weight limit" id="_2577"/>
                <xs:enumeration value="axle count limit" id="_2578"/>
                <xs:enumeration value="carpool lane available" id="_2579"/>
                <xs:enumeration value="carpool restrictions changed" id="_2580"/>
                <xs:enumeration value="hOV 2 no single occupant vehicles" id="_2581"/>
                <xs:enumeration value="hOV 3 no vehicles with less than three occupants" id="_2582"/>
                <xs:enumeration value="bus lane available for all vehicles" id="_2583"/>
                <xs:enumeration value="truck lane available for all vehicles" id="_2584"/>
                <xs:enumeration value="permits call in basis" id="_2585"/>
                <xs:enumeration value="permits temporarily closed" id="_2586"/>
                <xs:enumeration value="permits closed" id="_2587"/>
                <xs:enumeration value="permits open" id="_2675"/>
                <xs:enumeration value="restrictions for high profile vehicles lifted" id="_2676"/>
                <xs:enumeration value="width limit lifted" id="_2677"/>
                <xs:enumeration value="height limit lifted" id="_2678"/>
                <xs:enumeration value="length limit lifted" id="_2679"/>
                <xs:enumeration value="axle load limit lifted" id="_2680"/>
                <xs:enumeration value="weight limit lifted" id="_2681"/>
                <xs:enumeration value="axle count limit lifted" id="_2682"/>
                <xs:enumeration value="carpool restrictions lifted" id="_2683"/>
                <xs:enumeration value="lane restrictions lifted" id="_2684"/>
```

```
                <xs:enumeration value="ramp restrictions lifted" id="_2685"/>
                <xs:enumeration value="motor vehicle restrictions lifted" id="_2686"/>
                <xs:enumeration value="restrictions lifted" id="_2687"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:RestrictionClass" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.28 Data Element: DE_Roadside Assets

Use: The ITIS enumeration list commonly refered to as "Roadside Assets," is assigned the upper byte value of [41] (which provides for value ranges from 10496 to 10751, inclusive). This list is formally called "RoadsideAssets" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 74 different phrases, divided into 4 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 53 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 10624).

ASN.1 Representation:
```
RoadsideAssets ::= ENUMERATED {
    -- Inanimate Objects
    none                  (10496),   -- Implies free text follows
    light-pole            (10497),
    utiltity-pole         (10498),
    gantry-way            (10499),
    sign-support          (10500),   -- All forms of signage
    signal-pole           (10501),
    signage-public        (10502),
    signage-private       (10503),
    overhead-sign         (10568),   -- NEW: Do we want to keep this one?
    ground-sign           (10569),   -- NEW: Do we want to keep this one?
    cones                 (10504),   -- Typical std height cones as per MUTCD
    cones-post-type       (10505),   -- Also called channelizer cones or delineator
                                     -- posts
    cones-glue-post       (10506),   -- For all glue-down types
    cones-other           (10507),   -- Specialty types or misc. smaller cones
    barriers              (10508),
    barrier-Aframe        (10509),   -- Sizes larger than 1.5 meters in length
    barriers-heavy-duty   (10510),   -- All types requiring equipment to place
    barricade-type-III    (10511),   -- All collapsible Type III Barricades
    barricade-small       (10512),   -- Type I and all small A frame types, also
                                     -- so-called "mini" or "narrows" types
    solid-barrier         (10565),   -- NEW:  Added March 2005
    moveable-barrier      (10566),   -- NEW:  Added March 2005
    barricade-lights      (10513),   -- Std 7" light as per ITE stds
    beacon                (10514),   -- All types of strobe and rotating lights
    t-stand               (10515),
    a-stand               (10516),
    drums                 (10517),   -- Common drums and barrel types
    sand-barrel           (10567),   -- NEW:  Added March 2005
    impact-attenuator     (10518),   -- Water-filled and other crushable types
    barricade-tape        (10519),   -- Lettering type (legend) to be conveyed
                                     -- elsewhere
    safety-fence          (10520),
```

```
temp-pavement-markings     (10521),  -- All forms of temp markings
speed-bumps                (10522),
temp-curbs                 (10523),
parking-blocks             (10524),
signboard-fixed            (10525),
signboard-portable         (10526),
-- Controllable or Active Objects
har                        (10527),  -- Transmission type not known
har-AM                     (10528),
har-FM                     (10529),
har-DSRC                   (10530),
traffic-light              (10531),
lane-control-signal        (10532),
traffic-detector           (10533),
vehicle-detector           (10534),
system-alarm               (10535),
arrow-board                (10536),
fixed-VMS                  (10537),
mobile-VMS                 (10538),
ramp-control               (10539),
gate-control               (10540),  -- Other than rail types
temporary-traffic-light    (10541),
over-height-warning-system (10542),
over-weight-warning-system (10543),
emergency-telephones       (10544),
railroad-crossing-equipment (10545),
tunnel-ventilation         (10546),  -- Use also for fans
ccTV                       (10547),
environmental-sensor       (10548),
-- Items Used by Rail and Transit
switch                     (10549),  -- In the context of a railroad device
signal                     (10550),  -- In the context of a railroad device
third-rail                 (10551),
overhead-power             (10552),  -- Specifically the power feed line for a
                                     -- vehicle, do not use for general power lines
concrete-tie               (10553),
manhole-cover              (10559),
-- Misc. Items
wooden-tie                 (10554),
escalator                  (10555),
culvert                    (10560),
elevator                   (10556),
snow-poles                 (10561), -- A tall pole and overhanging arm (like a
                                    -- luminaire) with reflective markers to help
                                    -- indicate roadway in mountain passes during
                                    -- whiteout conditions
guide-poles                (10562), -- Poles along road to indicate guard rail in
                                    -- deep snow
track                      (10557),
expansion-joint            (10563), -- NEW:  Added March 2005
drawbridge                 (10558),
shifted-plate              (10564), -- NEW:  Added March 2005
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```xml
<xs:simpleType name="RoadsideAssets" >
    <xs:union>
        <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="10496"/>
             <xs:maxInclusive value="10751"/>
          </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="none" id="_10496"/>
             <xs:enumeration value="light pole" id="_10497"/>
             <xs:enumeration value="utiltity pole" id="_10498"/>
             <xs:enumeration value="gantry way" id="_10499"/>
             <xs:enumeration value="sign support" id="_10500"/>
```

```
            <xs:enumeration value="signal pole" id="_10501"/>
            <xs:enumeration value="signage public" id="_10502"/>
            <xs:enumeration value="signage private" id="_10503"/>
            <xs:enumeration value="overhead sign" id="_10568"/>
            <xs:enumeration value="ground sign" id="_10569"/>
            <xs:enumeration value="cones" id="_10504"/>
            <xs:enumeration value="cones post type" id="_10505"/>
            <xs:enumeration value="cones glue post" id="_10506"/>
            <xs:enumeration value="cones other" id="_10507"/>
            <xs:enumeration value="barriers" id="_10508"/>
            <xs:enumeration value="barrier Aframe" id="_10509"/>
            <xs:enumeration value="barriers heavy duty" id="_10510"/>
            <xs:enumeration value="barricade type III" id="_10511"/>
            <xs:enumeration value="barricade small" id="_10512"/>
            <xs:enumeration value="solid barrier" id="_10565"/>
            <xs:enumeration value="moveable barrier" id="_10566"/>
            <xs:enumeration value="barricade lights" id="_10513"/>
            <xs:enumeration value="beacon" id="_10514"/>
            <xs:enumeration value="t stand" id="_10515"/>
            <xs:enumeration value="a stand" id="_10516"/>
            <xs:enumeration value="drums" id="_10517"/>
            <xs:enumeration value="sand barrel" id="_10567"/>
            <xs:enumeration value="impact attenuator" id="_10518"/>
            <xs:enumeration value="barricade tape" id="_10519"/>
            <xs:enumeration value="safety fence" id="_10520"/>
            <xs:enumeration value="temp pavement markings" id="_10521"/>
            <xs:enumeration value="speed bumps" id="_10522"/>
            <xs:enumeration value="temp curbs" id="_10523"/>
            <xs:enumeration value="parking blocks" id="_10524"/>
            <xs:enumeration value="signboard fixed" id="_10525"/>
            <xs:enumeration value="signboard portable" id="_10526"/>
            <xs:enumeration value="har" id="_10527"/>
            <xs:enumeration value="har AM" id="_10528"/>
            <xs:enumeration value="har FM" id="_10529"/>
            <xs:enumeration value="har DSRC" id="_10530"/>
            <xs:enumeration value="traffic light" id="_10531"/>
            <xs:enumeration value="lane control signal" id="_10532"/>
            <xs:enumeration value="traffic detector" id="_10533"/>
            <xs:enumeration value="vehicle detector" id="_10534"/>
            <xs:enumeration value="system alarm" id="_10535"/>
            <xs:enumeration value="arrow board" id="_10536"/>
            <xs:enumeration value="fixed VMS" id="_10537"/>
            <xs:enumeration value="mobile VMS" id="_10538"/>
            <xs:enumeration value="ramp control" id="_10539"/>
            <xs:enumeration value="gate control" id="_10540"/>
            <xs:enumeration value="temporary traffic light" id="_10541"/>
            <xs:enumeration value="over height warning system" id="_10542"/>
            <xs:enumeration value="over weight warning system" id="_10543"/>
            <xs:enumeration value="emergency telephones" id="_10544"/>
            <xs:enumeration value="railroad crossing equipment" id="_10545"/>
            <xs:enumeration value="tunnel ventilation" id="_10546"/>
            <xs:enumeration value="ccTV" id="_10547"/>
            <xs:enumeration value="environmental sensor" id="_10548"/>
            <xs:enumeration value="switch" id="_10549"/>
            <xs:enumeration value="signal" id="_10550"/>
            <xs:enumeration value="third rail" id="_10551"/>
            <xs:enumeration value="overhead power" id="_10552"/>
            <xs:enumeration value="concrete tie" id="_10553"/>
            <xs:enumeration value="manhole cover" id="_10559"/>
            <xs:enumeration value="wooden tie" id="_10554"/>
            <xs:enumeration value="escalator" id="_10555"/>
            <xs:enumeration value="culvert" id="_10560"/>
            <xs:enumeration value="elevator" id="_10556"/>
            <xs:enumeration value="snow poles" id="_10561"/>
            <xs:enumeration value="guide poles" id="_10562"/>
            <xs:enumeration value="track" id="_10557"/>
            <xs:enumeration value="expansion joint" id="_10563"/>
            <xs:enumeration value="drawbridge" id="_10558"/>
            <xs:enumeration value="shifted plate" id="_10564"/>
        </xs:restriction>
    </xs:simpleType >
    <xs:simpleType>
```

```
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:RoadsideAssets" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.29 Data Element: DE_Roadwork

Use: The ITIS enumeration list commonly refered to as "Roadwork," is assigned the upper byte value of [04] (which provides for value ranges from 1024 to 1279, inclusive). This list is formally called "Roadwork" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 43 different phrases, divided into 4 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 84 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 1152).

ASN.1 Representation:
```
Roadwork ::= ENUMERATED  {
   -- Roads
   road-construction                         (1025),
   major-road-construction                   (1026),
   long-term-road-construction               (1027),
   construction-work                         (1028),
   paving-operations                         (1029),
   work-in-the-median                        (1030),
   road-reconstruction                       (1031),
   opposing-traffic                          (1032),
   narrow-lanes                              (1033),
   construction-traffic-merging              (1034),
   single-line-traffic-alternating-directions (1035),
   road-maintenance-operations               (1036),
   road-marking-operations                   (1037),
   road-widening                             (1061),
   cracks                                    (1052),  -- Used for disjoint roadway
                                                      -- surface
   crack-REMOVE                              (1058),  -- No Longer Used. Used for
                                                      -- disjoint roadway surface
   bumps                                     (1053),  -- Used for swelling
   drop-off                                  (1059),
   storm-drain                               (1054),
   -- Bridges
   bridge-maintenance-operations             (1038),
   bridge-construction                       (1039),
   bridge-demolition-work                    (1040),
   seismic-retrofit                          (1060),  -- All types of earthquake
                                                      -- construction

   -- Other
   overgrown-grass                           (1055),
   overgrown-brushshrubs                     (1056),
   overgrown-trees                           (1057),
   blasting                                  (1041),  -- See also: avalanche
   avalanche-control-activities              (1042),
   water-main-work                           (1043),
   gas-main-work                             (1044),
   work-on-underground-cables                (1045),
   work-on-underground-services              (1046),
   new-road-construction-layout              (1047),
   new-road-layout                           (1048),
   temporary-lane-markings                   (1049),
   temporary-traffic-lights                  (1050),
   emergency-maintenance                     (1051),
```

```
-- Cancel Types
road-maintenance-cleared                (1146),
normal-road-layout-restored             (1147),
road-work-clearance-in-progress         (1148),
road-construction-cleared               (1149),
normal-traffic-lanes-restored           (1150),
road-work-cleared                       (1151),
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```
<xs:simpleType name="Roadwork" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="1024"/>
                <xs:maxInclusive value="1279"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="road construction" id="_1025"/>
                <xs:enumeration value="major road construction" id="_1026"/>
                <xs:enumeration value="long term road construction" id="_1027"/>
                <xs:enumeration value="construction work" id="_1028"/>
                <xs:enumeration value="paving operations" id="_1029"/>
                <xs:enumeration value="work in the median" id="_1030"/>
                <xs:enumeration value="road reconstruction" id="_1031"/>
                <xs:enumeration value="opposing traffic" id="_1032"/>
                <xs:enumeration value="narrow lanes" id="_1033"/>
                <xs:enumeration value="construction traffic merging" id="_1034"/>
                <xs:enumeration value="single line traffic alternating directions" id="_1035"/>
                <xs:enumeration value="road maintenance operations" id="_1036"/>
                <xs:enumeration value="road marking operations" id="_1037"/>
                <xs:enumeration value="road widening" id="_1061"/>
                <xs:enumeration value="cracks" id="_1052"/>
                <xs:enumeration value="crack REMOVE" id="_1058"/>
                <xs:enumeration value="bumps" id="_1053"/>
                <xs:enumeration value="drop off" id="_1059"/>
                <xs:enumeration value="storm drain" id="_1054"/>
                <xs:enumeration value="bridge maintenance operations" id="_1038"/>
                <xs:enumeration value="bridge construction" id="_1039"/>
                <xs:enumeration value="bridge demolition work" id="_1040"/>
                <xs:enumeration value="seismic retrofit" id="_1060"/>
                <xs:enumeration value="overgrown grass" id="_1055"/>
                <xs:enumeration value="overgrown brushshrubs" id="_1056"/>
                <xs:enumeration value="overgrown trees" id="_1057"/>
                <xs:enumeration value="blasting" id="_1041"/>
                <xs:enumeration value="avalanche control activities" id="_1042"/>
                <xs:enumeration value="water main work" id="_1043"/>
                <xs:enumeration value="gas main work" id="_1044"/>
                <xs:enumeration value="work on underground cables" id="_1045"/>
                <xs:enumeration value="work on underground services" id="_1046"/>
                <xs:enumeration value="new road construction layout" id="_1047"/>
                <xs:enumeration value="new road layout" id="_1048"/>
                <xs:enumeration value="temporary lane markings" id="_1049"/>
                <xs:enumeration value="temporary traffic lights" id="_1050"/>
                <xs:enumeration value="emergency maintenance" id="_1051"/>
                <xs:enumeration value="road maintenance cleared" id="_1146"/>
                <xs:enumeration value="normal road layout restored" id="_1147"/>
                <xs:enumeration value="road work clearance in progress" id="_1148"/>
                <xs:enumeration value="road construction cleared" id="_1149"/>
                <xs:enumeration value="normal traffic lanes restored" id="_1150"/>
                <xs:enumeration value="road work cleared" id="_1151"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
```

```
            <xs:simpleType>
                <xs:restriction base="local:Roadwork" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called <u>DF_ITIS_EventType</u> <u><ASN></u> <u><XML></u>. In addition, this item may be used by data structures in other ITS standards.

6.30 Data Element: DE_Special Events

Use: The ITIS enumeration list commonly refered to as "Special Events," is assigned the upper byte value of [15] (which provides for value ranges from 3840 to 4095, inclusive). This list is formally called "SpecialEvents" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 23 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 104 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 3968).

ASN.1 Representation:
```
SpecialEvents ::= ENUMERATED  {
    major-event          (3841),
    airshow              (3842),
    hot-air-ballooning   (3843),
    concert              (3844),
    state-occasion       (3845),
    vIP-visit            (3846),
    show                 (3847),
    festival             (3848),   -- Used for farmers' markets as well
    exhibition           (3849),
    performing-arts      (3850),
    outdoor-market       (3851),   -- Used for farmers' markets as well
    fair                 (3852),
    carnival             (3853),
    fireworks-display    (3854),
    trade-expo           (3855),
    movie-filming        (3856),
    presidential-visit   (3857),
    parade               (3858),
    procession           (3859),
    funeral-procession   (3860),
    crowd                (3861),
    holiday-traffic-crowds (3862),
    -- Cancel Types
    event-ended          (3967),
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- Events which affect the local roads
```

XML Representation:
```
<xs:simpleType name="SpecialEvents" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="3840"/>
                <xs:maxInclusive value="4095"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="major event" id="_3841"/>
                <xs:enumeration value="airshow" id="_3842"/>
                <xs:enumeration value="hot air ballooning" id="_3843"/>
                <xs:enumeration value="concert" id="_3844"/>
                <xs:enumeration value="state occasion" id="_3845"/>
```

```
                    <xs:enumeration value="vIP visit" id="_3846"/>
                    <xs:enumeration value="show" id="_3847"/>
                    <xs:enumeration value="festival" id="_3848"/>
                    <xs:enumeration value="exhibition" id="_3849"/>
                    <xs:enumeration value="performing arts" id="_3850"/>
                    <xs:enumeration value="outdoor market" id="_3851"/>
                    <xs:enumeration value="fair" id="_3852"/>
                    <xs:enumeration value="carnival" id="_3853"/>
                    <xs:enumeration value="fireworks display" id="_3854"/>
                    <xs:enumeration value="trade expo" id="_3855"/>
                    <xs:enumeration value="movie filming" id="_3856"/>
                    <xs:enumeration value="presidential visit" id="_3857"/>
                    <xs:enumeration value="parade" id="_3858"/>
                    <xs:enumeration value="procession" id="_3859"/>
                    <xs:enumeration value="funeral procession" id="_3860"/>
                    <xs:enumeration value="crowd" id="_3861"/>
                    <xs:enumeration value="holiday traffic crowds" id="_3862"/>
                    <xs:enumeration value="event ended" id="_3967"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:SpecialEvents" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.31 Data Element: DE_Sporting Events

Use: The ITIS enumeration list commonly refered to as "Sporting Events," is assigned the upper byte value of [14] (which provides for value ranges from 3584 to 3839, inclusive). This list is formally called "SportingEvents" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 25 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 102 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 3712).

ASN.1 Representation:
```
SportingEvents ::= ENUMERATED {
    sports-event           (3585),
    game                   (3586),
    tournament             (3587),
    track-and-field-event  (3588),
    baseball-game          (3589),
    basketball-game        (3590),
    boxing-match           (3591),
    football-game          (3592),
    soccer-game            (3593),
    golf-tournament        (3594),
    hockey-game            (3595),
    tennis-tournament      (3596),
    wrestling-match        (3597),
    road-race              (3598),  -- Hint: used for motorcycle races as well
    automobile-race        (3599),
    bicycle-race           (3600),
    race-event             (3601),
    marathon               (3602),
    horse-show             (3603),
    rodeo                  (3604),
```

```
    water-sports-event    (3605),
    winter-sports-event   (3606),
    skating-event         (3607),
    dog-sled-race         (3608),
    -- Cancel Types
    sporting-event-ended  (3711),
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- Events occurring on or nearby the roadway
```

XML Representation:

```xml
<xs:simpleType name="SportingEvents" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="3584"/>
                <xs:maxInclusive value="3839"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="sports event" id="_3585"/>
                <xs:enumeration value="game" id="_3586"/>
                <xs:enumeration value="tournament" id="_3587"/>
                <xs:enumeration value="track and field event" id="_3588"/>
                <xs:enumeration value="baseball game" id="_3589"/>
                <xs:enumeration value="basketball game" id="_3590"/>
                <xs:enumeration value="boxing match" id="_3591"/>
                <xs:enumeration value="football game" id="_3592"/>
                <xs:enumeration value="soccer game" id="_3593"/>
                <xs:enumeration value="golf tournament" id="_3594"/>
                <xs:enumeration value="hockey game" id="_3595"/>
                <xs:enumeration value="tennis tournament" id="_3596"/>
                <xs:enumeration value="wrestling match" id="_3597"/>
                <xs:enumeration value="road race" id="_3598"/>
                <xs:enumeration value="automobile race" id="_3599"/>
                <xs:enumeration value="bicycle race" id="_3600"/>
                <xs:enumeration value="race event" id="_3601"/>
                <xs:enumeration value="marathon" id="_3602"/>
                <xs:enumeration value="horse show" id="_3603"/>
                <xs:enumeration value="rodeo" id="_3604"/>
                <xs:enumeration value="water sports event" id="_3605"/>
                <xs:enumeration value="winter sports event" id="_3606"/>
                <xs:enumeration value="skating event" id="_3607"/>
                <xs:enumeration value="dog sled race" id="_3608"/>
                <xs:enumeration value="sporting event ended" id="_3711"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:SportingEvents" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.32 Data Element: DE_Suggestion Advice

Use: The ITIS enumeration list commonly refered to as "Suggestion Advice," is assigned the upper byte value of [26] (which provides for value ranges from 6656 to 6911, inclusive). This list is formally called "SuggestionAdvice" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 21 different phrases. The remaining 106 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 6784).

ASN.1 Representation:
```
SuggestionAdvice ::= ENUMERATED  {
    why-not-ride-share                      (6657),
    is-this-your-no-ride-day                (6658),
    why-not-use-transit                     (6659),
    why-not-park-and-ride                   (6660),
    why-not-try-paratransit                 (6661),
    why-not-travel-by-rail                  (6662),
    why-not-use-the-subway                  (6663),
    why-not-try-rapid-transit               (6664),
    why-not-travel-by-bus                   (6665),
    your-parking-ticket-covers-the-return-ride (6666),
    avoid-the-rush-hour                     (6667),
    do-not-allow-unnecessary-gaps           (6668),
    follow-the-vehicle-in-front-smoothly    (6669),
    do-not-slow-down-unnecessarily          (6670),
    watch-for-muggers                       (6671),
    watch-for-pickpockets                   (6672),
    watch-for-thieves                       (6673),
    sorry-for-any-delay                     (6674),
    thank-you-for-your-understanding        (6675),
    we-appreciate-your-patience             (6676),
    we-are-grateful-for-your-cooperation    (6677),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="SuggestionAdvice" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="6656"/>
              <xs:maxInclusive value="6911"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="why not ride share" id="_6657"/>
              <xs:enumeration value="is this your no ride day" id="_6658"/>
              <xs:enumeration value="why not use transit" id="_6659"/>
              <xs:enumeration value="why not park and ride" id="_6660"/>
              <xs:enumeration value="why not try paratransit" id="_6661"/>
              <xs:enumeration value="why not travel by rail" id="_6662"/>
              <xs:enumeration value="why not use the subway" id="_6663"/>
              <xs:enumeration value="why not try rapid transit" id="_6664"/>
              <xs:enumeration value="why not travel by bus" id="_6665"/>
              <xs:enumeration value="your parking ticket covers the return ride" id="_6666"/>
              <xs:enumeration value="avoid the rush hour" id="_6667"/>
              <xs:enumeration value="do not allow unnecessary gaps" id="_6668"/>
              <xs:enumeration value="follow the vehicle in front smoothly" id="_6669"/>
              <xs:enumeration value="do not slow down unnecessarily" id="_6670"/>
              <xs:enumeration value="watch for muggers" id="_6671"/>
              <xs:enumeration value="watch for pickpockets" id="_6672"/>
              <xs:enumeration value="watch for thieves" id="_6673"/>
              <xs:enumeration value="sorry for any delay" id="_6674"/>
              <xs:enumeration value="thank you for your understanding" id="_6675"/>
```

```
            <xs:enumeration value="we appreciate your patience" id="_6676"/>
            <xs:enumeration value="we are grateful for your cooperation" id="_6677"/>
        </xs:restriction>
    </xs:simpleType >
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:pattern value="\[.+\].*"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType>
        <xs:restriction base="local:SuggestionAdvice" />
    </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.33 Data Element: DE_Temperature

Use: The ITIS enumeration list commonly refered to as "Temperature," is assigned the upper byte value of [22] (which provides for value ranges from 5632 to 5887, inclusive). This list is formally called "Temperature" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 23 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 104 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 5760).

ASN.1 Representation:
```
Temperature ::= ENUMERATED  {
    maximum-temperature                 (5633),   -- This index is not to be used as a
                                                  -- default value for this category
    temperature                         (5634),   -- Typically followed by a number
                                                  -- value and a unit value
    minimum-temperature                 (5635),
    current-temperature                 (5636),
    heat-index                          (5637),
    extreme-heat                        (5638),
    hot                                 (5639),
    hotter                              (5640),
    heat                                (5641),
    warmer                              (5642),
    warm                                (5643),
    mild                                (5644),
    cool                                (5645),
    cooler                              (5646),
    cold                                (5647),
    colder                              (5648),
    very-cold                           (5649),
    extreme-cold                        (5650),
    wind-chill                          (5651),
    dewpoint                            (5652),
    relative-humidity                   (5653),
    -- Cancel Types
    temperatures-close-to-the-seasonal-norm (5758),
    less-extreme-temperatures           (5759),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="Temperature" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="5632"/>
                <xs:maxInclusive value="5887"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="maximum temperature" id="_5633"/>
                <xs:enumeration value="temperature" id="_5634"/>
                <xs:enumeration value="minimum temperature" id="_5635"/>
                <xs:enumeration value="current temperature" id="_5636"/>
                <xs:enumeration value="heat index" id="_5637"/>
                <xs:enumeration value="extreme heat" id="_5638"/>
                <xs:enumeration value="hot" id="_5639"/>
                <xs:enumeration value="hotter" id="_5640"/>
                <xs:enumeration value="heat" id="_5641"/>
                <xs:enumeration value="warmer" id="_5642"/>
                <xs:enumeration value="warm" id="_5643"/>
                <xs:enumeration value="mild" id="_5644"/>
                <xs:enumeration value="cool" id="_5645"/>
                <xs:enumeration value="cooler" id="_5646"/>
                <xs:enumeration value="cold" id="_5647"/>
                <xs:enumeration value="colder" id="_5648"/>
                <xs:enumeration value="very cold" id="_5649"/>
                <xs:enumeration value="extreme cold" id="_5650"/>
                <xs:enumeration value="wind chill" id="_5651"/>
                <xs:enumeration value="dewpoint" id="_5652"/>
                <xs:enumeration value="relative humidity" id="_5653"/>
                <xs:enumeration value="temperatures close to the seasonal norm" id="_5758"/>
                <xs:enumeration value="less extreme temperatures" id="_5759"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:Temperature" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.34 Data Element: DE_Traffic Conditions

Use: The ITIS enumeration list commonly refered to as "Traffic Conditions," is assigned the upper byte value of [01] (which provides for value ranges from 256 to 511, inclusive). This list is formally called "TrafficConditions" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 18 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 109 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 384).

ASN.1 Representation:
```
TrafficConditions ::= ENUMERATED  {
    stopped-traffic                 (257),
    stop-and-go-traffic             (258),
    slow-traffic                    (259),
    heavy-traffic                   (260),
    traffic-building                (261),
    long-queues                     (262),
    traffic-congestion              (263),
    traffic-lighter-than-normal     (264),
    traffic-heavier-than-normal     (265),
    traffic-much-heavier-than-normal (266),
    current-speed                   (267),  -- NEW: Added May 2005  Typically followed by
                                            -- a value entry and a units entry (MPH/KPH)
    speed-limit                     (268),  -- NEW: Added May 2005  Typically followed by
                                            -- a value entry and a units entry (MPH/KPH)
    travel-time                     (269),  -- NEW: Added May 2005  Typically followed by
                                            -- a value entry and a units entry (seconds)
    -- Cancel Types
    traffic-flowing-freely          (379),
    traffic-easing                  (380),  -- Alternative rendering: traffic clearing
    traffic-returned-to-normal      (381),
    no-problems-to-report           (382),
    traffic-congestion-cleared      (383),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="TrafficConditions" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="256"/>
                <xs:maxInclusive value="511"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="stopped traffic" id="_257"/>
                <xs:enumeration value="stop and go traffic" id="_258"/>
                <xs:enumeration value="slow traffic" id="_259"/>
                <xs:enumeration value="heavy traffic" id="_260"/>
                <xs:enumeration value="traffic building" id="_261"/>
                <xs:enumeration value="long queues" id="_262"/>
                <xs:enumeration value="traffic congestion" id="_263"/>
                <xs:enumeration value="traffic lighter than normal" id="_264"/>
                <xs:enumeration value="traffic heavier than normal" id="_265"/>
                <xs:enumeration value="traffic much heavier than normal" id="_266"/>
                <xs:enumeration value="current speed" id="_267"/>
                <xs:enumeration value="speed limit" id="_268"/>
                <xs:enumeration value="travel time" id="_269"/>
                <xs:enumeration value="traffic flowing freely" id="_379"/>
                <xs:enumeration value="traffic easing" id="_380"/>
                <xs:enumeration value="traffic returned to normal" id="_381"/>
                <xs:enumeration value="no problems to report" id="_382"/>
                <xs:enumeration value="traffic congestion cleared" id="_383"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:TrafficConditions" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called <u>DF_ITIS_EventType</u> <u><ASN></u> <u><XML></u>. In addition, this item may be used by data structures in other ITS standards.

6.35 Data Element: DE_Transit Mode

Use: The ITIS enumeration list commonly refered to as "Transit Mode," is assigned the upper byte value of [35] (which provides for value ranges from 8960 to 9215, inclusive). This list is formally called "TransitMode" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 24 different phrases. The remaining 103 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 9088).

ASN.1 Representation:
```
TransitMode ::= ENUMERATED  {
    travel             (8961),  -- Hint: may include all modes
    transit            (8962),  -- Hint: may include all public transit modes
    bus                (8963),
    trolleybus         (8964),
    rail               (8965),
    commuter-rail      (8966),
    subway             (8967),
    rapid-transit      (8968),
    light-rail         (8969),
    streetcar          (8970),  -- Alternative Rendering:   tram
    dial-a-ride        (8971),  -- Alternative Rendering:   demand responsive transit
    park-and-ride      (8972),
    shuttle            (8973),
    free-shuttle       (8974),  -- Alternative Rendering:   tram
    airport-shuttle    (8975),
    taxies             (8976),
    ferry              (8977),
    passenger-ferry    (8978),
    vehicle-ferry      (8979),
    aerial-tramway     (8980),
    automated-guideway (8981),  -- Include all types of guideways
    cable-cars         (8982),
    monorail           (8983),
    air-travel         (8984),  -- All modes of air travel
    ... -- # LOCAL_CONTENT_ITIS
    }
-- Used to describe various types of transit services, and information pertaining
-- to the whole mode.  If you wish to identify a specific vehicle (such as a bus not
-- the bus fleet), use Vehicle Group
```

XML Representation:
```
<xs:simpleType name="TransitMode" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="8960"/>
                <xs:maxInclusive value="9215"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="travel" id="_8961"/>
                <xs:enumeration value="transit" id="_8962"/>
                <xs:enumeration value="bus" id="_8963"/>
                <xs:enumeration value="trolleybus" id="_8964"/>
                <xs:enumeration value="rail" id="_8965"/>
                <xs:enumeration value="commuter rail" id="_8966"/>
                <xs:enumeration value="subway" id="_8967"/>
                <xs:enumeration value="rapid transit" id="_8968"/>
                <xs:enumeration value="light rail" id="_8969"/>
                <xs:enumeration value="streetcar" id="_8970"/>
```

```
                <xs:enumeration value="dial a ride" id="_8971"/>
                <xs:enumeration value="park and ride" id="_8972"/>
                <xs:enumeration value="shuttle" id="_8973"/>
                <xs:enumeration value="free shuttle" id="_8974"/>
                <xs:enumeration value="airport shuttle" id="_8975"/>
                <xs:enumeration value="taxies" id="_8976"/>
                <xs:enumeration value="ferry" id="_8977"/>
                <xs:enumeration value="passenger ferry" id="_8978"/>
                <xs:enumeration value="vehicle ferry" id="_8979"/>
                <xs:enumeration value="aerial tramway" id="_8980"/>
                <xs:enumeration value="automated guideway" id="_8981"/>
                <xs:enumeration value="cable cars" id="_8982"/>
                <xs:enumeration value="monorail" id="_8983"/>
                <xs:enumeration value="air travel" id="_8984"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:TransitMode" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.36 Data Element: DE_Transit Operations

Use: The ITIS enumeration list commonly refered to as "Transit Operations," is assigned the upper byte value of [42] (which provides for value ranges from 10752 to 11007, inclusive). This list is formally called "TransitOperations" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 53 different phrases. The remaining 74 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 10880).

ASN.1 Representation:
```
TransitOperations ::= ENUMERATED {
    unknown-transit-problem                     (10753),  -- NEW: Added March 2005
    sleeping-customer                           (10754),  -- NEW: Added May 2005
    assault-on-passenger                        (10755),  -- NEW: Added March 2005
    assault-on-employee                         (10756),  -- NEW: Added May 2005
    broken-seat                                 (10757),  -- NEW: Added March 2005
    bus-alarm                                   (10758),  -- NEW: Added March 2005
    crime-or-drug-deal                          (10759),  -- NEW: Added March 2005
    eating-on-board                             (10760),  -- NEW: Added March 2005
    equipment-problem-with-air-conditioning     (10761),  -- NEW: Added March 2005
    equipment-problem-with-air-system           (10762),  -- NEW: Added March 2005
    equipment-problem-with-brakes               (10763),  -- NEW: Added March 2005
    equipment-problem-with-chassis-or-suspension (10764), -- NEW: Added March 2005
    equipment-problem-with-cooling-system       (10765),  -- NEW: Added March 2005
    equipment-problem-with-doors                (10766),  -- NEW: Added March 2005
    equipment-problem-with-electrical           (10767),  -- NEW: Added March 2005
    equipment-problem-with-engine               (10768),  -- NEW: Added March 2005
    equipment-problem-with-exterior-or-body     (10769),  -- NEW: Added March 2005
    equipment-problem-with-fare-collection      (10770),  -- NEW: Added March 2005
    equipment-problem-with-fuel-or-exhaust      (10771),  -- NEW: Added March 2005
    equipment-problem-with-horn                 (10772),  -- NEW: Added March 2005
    equipment-problem-with-interior             (10773),  -- NEW: Added March 2005
    equipment-problem-with-liftkneeling         (10774),  -- NEW: Added March 2005
    equipment-problem-with-lights               (10775),  -- NEW: Added March 2005
    equipment-problem-with-lubrication          (10776),  -- NEW: Added March 2005
    equipment-problem-with-radio-or-communication (10777), -- NEW: Added March 2005
```

```
     equipment-problem-with-signs                (10778),  -- NEW: Added March 2005
     equipment-problem-with-steering             (10779),  -- NEW: Added March 2005
     equipment-problem-with-tires                (10780),  -- NEW: Added March 2005
     equipment-problem-with-transmission         (10781),  -- NEW: Added March 2005
     equipment-problem-with-unknown-alarm        (10782),  -- NEW: Added March 2005
     equipment-problem-with-wipers               (10783),  -- NEW: Added March 2005
     fare-dispute-expired-pass                   (10784),  -- NEW: Added March 2005
     fare-dispute-expired-transfer               (10785),  -- NEW: Added March 2005
     fare-dispute-expired-upgrade                (10786),  -- NEW: Added March 2005
     fare-dispute-other                          (10787),  -- NEW: Added March 2005
     fare-dispute-refuses-to-pay                 (10788),  -- NEW: Added March 2005
     lift-passenger-cycle-completed              (10789),  -- NEW: Added March 2005
     lift-passenger-ready-to-alight              (10790),  -- NEW: Added March 2005
     lift-passenger-ready-to-board               (10791),  -- NEW: Added March 2005
     lost-article                                (10792),  -- NEW: Added March 2005
     objects-thrown                              (10793),  -- NEW: Added March 2005
     passenger-accident-alighting                (10794),  -- NEW: Added March 2005
     passenger-accident-boarding                 (10795),  -- NEW: Added March 2005
     passenger-accident-fallen-on-board          (10796),  -- NEW: Added March 2005
     passenger-load                              (10797),  -- NEW: Added March 2005
     passenger-accident-other                    (10798),  -- NEW: Added March 2005
     passenger-sick-or-injured                   (10799),  -- NEW: Added March 2005
     right-of-way                                (10800),  -- NEW: Added March 2005
     theft                                       (10801),  -- NEW: Added March 2005
     theft-of-service                            (10802),  -- NEW: Added March 2005
     waiting-to-get-relief-for-schedule-break    (10803),  -- NEW: Added March 2005
     waiting-to-get-relief-after-run-is-finished (10804),  -- NEW: Added March 2005
     waiting-to-provide-relief                   (10805),  -- NEW: Added March 2005
     ... -- # LOCAL_CONTENT_ITIS
     }
```

XML Representation:

```xml
<xs:simpleType name="TransitOperations" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="10752"/>
              <xs:maxInclusive value="11007"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="unknown transit problem" id="_10753"/>
              <xs:enumeration value="sleeping customer" id="_10754"/>
              <xs:enumeration value="assault on passenger" id="_10755"/>
              <xs:enumeration value="assault on employee" id="_10756"/>
              <xs:enumeration value="broken seat" id="_10757"/>
              <xs:enumeration value="bus alarm" id="_10758"/>
              <xs:enumeration value="crime or drug deal" id="_10759"/>
              <xs:enumeration value="eating on board" id="_10760"/>
              <xs:enumeration value="equipment problem with air conditioning" id="_10761"/>
              <xs:enumeration value="equipment problem with air system" id="_10762"/>
              <xs:enumeration value="equipment problem with brakes" id="_10763"/>
              <xs:enumeration value="equipment problem with chassis or suspension" id="_10764"/>
              <xs:enumeration value="equipment problem with cooling system" id="_10765"/>
              <xs:enumeration value="equipment problem with doors" id="_10766"/>
              <xs:enumeration value="equipment problem with electrical" id="_10767"/>
              <xs:enumeration value="equipment problem with engine" id="_10768"/>
              <xs:enumeration value="equipment problem with exterior or body" id="_10769"/>
              <xs:enumeration value="equipment problem with fare collection" id="_10770"/>
              <xs:enumeration value="equipment problem with fuel or exhaust" id="_10771"/>
              <xs:enumeration value="equipment problem with horn" id="_10772"/>
              <xs:enumeration value="equipment problem with interior" id="_10773"/>
              <xs:enumeration value="equipment problem with liftkneeling" id="_10774"/>
              <xs:enumeration value="equipment problem with lights" id="_10775"/>
              <xs:enumeration value="equipment problem with lubrication" id="_10776"/>
              <xs:enumeration value="equipment problem with radio or communication" id="_10777"/>
              <xs:enumeration value="equipment problem with signs" id="_10778"/>
              <xs:enumeration value="equipment problem with steering" id="_10779"/>
              <xs:enumeration value="equipment problem with tires" id="_10780"/>
```

```
                <xs:enumeration value="equipment problem with transmission" id="_10781"/>
                <xs:enumeration value="equipment problem with unknown alarm" id="_10782"/>
                <xs:enumeration value="equipment problem with wipers" id="_10783"/>
                <xs:enumeration value="fare dispute expired pass" id="_10784"/>
                <xs:enumeration value="fare dispute expired transfer" id="_10785"/>
                <xs:enumeration value="fare dispute expired upgrade" id="_10786"/>
                <xs:enumeration value="fare dispute other" id="_10787"/>
                <xs:enumeration value="fare dispute refuses to pay" id="_10788"/>
                <xs:enumeration value="lift passenger cycle completed" id="_10789"/>
                <xs:enumeration value="lift passenger ready to alight" id="_10790"/>
                <xs:enumeration value="lift passenger ready to board" id="_10791"/>
                <xs:enumeration value="lost article" id="_10792"/>
                <xs:enumeration value="objects thrown" id="_10793"/>
                <xs:enumeration value="passenger accident alighting" id="_10794"/>
                <xs:enumeration value="passenger accident boarding" id="_10795"/>
                <xs:enumeration value="passenger accident fallen on board" id="_10796"/>
                <xs:enumeration value="passenger load" id="_10797"/>
                <xs:enumeration value="passenger accident other" id="_10798"/>
                <xs:enumeration value="passenger sick or injured" id="_10799"/>
                <xs:enumeration value="right of way" id="_10800"/>
                <xs:enumeration value="theft" id="_10801"/>
                <xs:enumeration value="theft of service" id="_10802"/>
                <xs:enumeration value="waiting to get relief for schedule break" id="_10803"/>
                <xs:enumeration value="waiting to get relief after run is finished" id="_10804"/>
                <xs:enumeration value="waiting to provide relief" id="_10805"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:TransitOperations" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.37 Data Element: DE_Traveler Group Affected

Use: The ITIS enumeration list commonly refered to as "Traveler Group Affected," is assigned the upper byte value of [37] (which provides for value ranges from 9472 to 9727, inclusive). This list is formally called "TravelerGroupAffected" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 15 different phrases. The remaining 112 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 9600).

ASN.1 Representation:
```
TravelerGroupAffected ::= ENUMERATED  {
    through-traffic                 (9473),
    holiday-traffic                 (9474),
    residents                       (9475),
    visitors                        (9476),
    long-distance-traffic           (9477),
    local-traffic                   (9478),
    regional-traffic                (9479),
    arrivals                        (9480),
    departures                      (9481),
    airline-travelers               (9482),
    commuter-airline-travelers      (9483),
    domestic-airline-travelers      (9484),
    international-airline-travelers  (9485),
    pedestrians                     (9486),
    bicyclists                      (9487),  -- Hint: may be used as a traveler
```

```
                                          -- restriction, as in "bicycles prohibited on
                                          -- subways during rush hour" or "road closed
                                          -- to bicyclists"
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="TravelerGroupAffected" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="9472"/>
              <xs:maxInclusive value="9727"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:enumeration value="through traffic" id="_9473"/>
              <xs:enumeration value="holiday traffic" id="_9474"/>
              <xs:enumeration value="residents" id="_9475"/>
              <xs:enumeration value="visitors" id="_9476"/>
              <xs:enumeration value="long distance traffic" id="_9477"/>
              <xs:enumeration value="local traffic" id="_9478"/>
              <xs:enumeration value="regional traffic" id="_9479"/>
              <xs:enumeration value="arrivals" id="_9480"/>
              <xs:enumeration value="departures" id="_9481"/>
              <xs:enumeration value="airline travelers" id="_9482"/>
              <xs:enumeration value="commuter airline travelers" id="_9483"/>
              <xs:enumeration value="domestic airline travelers" id="_9484"/>
              <xs:enumeration value="international airline travelers" id="_9485"/>
              <xs:enumeration value="pedestrians" id="_9486"/>
              <xs:enumeration value="bicyclists" id="_9487"/>
           </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="local:TravelerGroupAffected" />
        </xs:simpleType>
     </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.38 Data Element: DE_Unit Values

Use: The ITIS enumeration list commonly refered to as "Unit Values," is assigned the upper byte value of [34] (which provides for value ranges from 8704 to 8959, inclusive). This list is formally called "Units" in the ASN.1 and XML productions. The items in this enumeration list are not allowed to be used as an event category classification. This list contains a total of 52 different phrases, divided into 4 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 75 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 8832).

ASN.1 Representation:

```
Units ::= ENUMERATED  {
    -- Areas,  Distances  &  Speeds
    square-feet             (8705),
    square-meters           (8706),
    acres                   (8707),
    hectares                (8708),
    inches                  (8709),
    feet                    (8710),
    mile                    (8711),  -- Hint: used for offset as in "at mile 123"
                                     -- Alternative Rendering: milepost marker
    miles                   (8712),  -- Hint: Used for distance, as in "ending 5 miles"
    nautical-miles          (8713),
    millimeters             (8714),
    meters                  (8715),
    kilometer               (8716),  -- Hint: used for offset as in "at kilometer 123"
    kilometers              (8717),
    feet-per-second         (8718),
    meters-per-second       (8719),
    mPH                     (8720),
    kPH                     (8721),
    knots                   (8722),
    -- Times,  Days  &  Dates
    aM                      (8723),  -- Both a time value and a radio band value.  A
                                     -- number value may PRECEDE the unit value used in
                                     -- representing the frequency of a radio station
    pM                      (8724),
    weekends                (8725),  -- In general date/time values can be better coded in
                                     -- other ways in most message sets
    holiday                 (8726),
    seconds                 (8727),
    minutes                 (8728),
    hours                   (8729),
    days                    (8730),  -- Hint: useful for events occurring for at least 24
                                     -- hours
    weeks                   (8731),
    months                  (8732),
    -- Temps, Weights, Masses and Measurements
    degrees                 (8733),  -- Used for latitude, longitude and bearing measured
                                     -- clockwise from North
    degrees-Celsius         (8734),  -- Alternate renderings possible
    degrees-Fahrenheit      (8735),  -- Alternate renderings possible
    grams                   (8736),
    kilograms               (8737),
    ounces                  (8738),
    pounds                  (8739),
    tons                    (8740),
    fluid-ounces            (8741),
    gallons                 (8742),
    milliliters             (8743),
    liters                  (8744),
    kilograms-per-lane-mile (8745),
    tons-per-lane-mile      (8746),
    -- Misc.
    dollar                  (8747),  -- Alternative rendering: dollar symbol  Not to be
                                     -- used as the default value for this category
    percent                 (8748),  -- Alternative rendering: percent symbol
    time-delimiter          (8749),  -- Alternative rendering: "-"
    dollars                 (8750),  -- Alternative rendering can use local currency sign
    flight-number           (8751),  -- A number value may PRECEDE the unit value in use
    person-people           (8752),
    response-plan           (8753),  -- A value may PRECEDE the unit value in use
                                     -- (involving a combination of numbers and / or
                                     -- letters)
    placard-type            (8754),  -- For hazmat class and division type designations, a
                                     -- value may PRECEDE the unit value in use
    placard-number          (8755),  -- For chemical designations, a value may PRECEDE the
                                     -- unit value in use
    fM                      (8756),  -- A number value may PRECEDE the unit value in use
                                     -- representing the frequency of a radio station
    ... -- # LOCAL_CONTENT_ITIS
```

```
    }
    -- Used in conjunction with # values.  In many ITS messages there are specific
    -- place holders (data elements) in the message set to send these values.  This
    -- category shall not be used to circumvent message sets which support various units
    -- in this way
```

XML Representation:

```xml
<xs:simpleType name="Units" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="8704"/>
                <xs:maxInclusive value="8959"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="square feet" id="_8705"/>
                <xs:enumeration value="square meters" id="_8706"/>
                <xs:enumeration value="acres" id="_8707"/>
                <xs:enumeration value="hectares" id="_8708"/>
                <xs:enumeration value="inches" id="_8709"/>
                <xs:enumeration value="feet" id="_8710"/>
                <xs:enumeration value="mile" id="_8711"/>
                <xs:enumeration value="miles" id="_8712"/>
                <xs:enumeration value="nautical miles" id="_8713"/>
                <xs:enumeration value="millimeters" id="_8714"/>
                <xs:enumeration value="meters" id="_8715"/>
                <xs:enumeration value="kilometer" id="_8716"/>
                <xs:enumeration value="kilometers" id="_8717"/>
                <xs:enumeration value="feet per second" id="_8718"/>
                <xs:enumeration value="meters per second" id="_8719"/>
                <xs:enumeration value="mPH" id="_8720"/>
                <xs:enumeration value="kPH" id="_8721"/>
                <xs:enumeration value="knots" id="_8722"/>
                <xs:enumeration value="aM" id="_8723"/>
                <xs:enumeration value="pM" id="_8724"/>
                <xs:enumeration value="weekends" id="_8725"/>
                <xs:enumeration value="holiday" id="_8726"/>
                <xs:enumeration value="seconds" id="_8727"/>
                <xs:enumeration value="minutes" id="_8728"/>
                <xs:enumeration value="hours" id="_8729"/>
                <xs:enumeration value="days" id="_8730"/>
                <xs:enumeration value="weeks" id="_8731"/>
                <xs:enumeration value="months" id="_8732"/>
                <xs:enumeration value="degrees" id="_8733"/>
                <xs:enumeration value="degrees Celsius" id="_8734"/>
                <xs:enumeration value="degrees Fahrenheit" id="_8735"/>
                <xs:enumeration value="grams" id="_8736"/>
                <xs:enumeration value="kilograms" id="_8737"/>
                <xs:enumeration value="ounces" id="_8738"/>
                <xs:enumeration value="pounds" id="_8739"/>
                <xs:enumeration value="tons" id="_8740"/>
                <xs:enumeration value="fluid ounces" id="_8741"/>
                <xs:enumeration value="gallons" id="_8742"/>
                <xs:enumeration value="milliliters" id="_8743"/>
                <xs:enumeration value="liters" id="_8744"/>
                <xs:enumeration value="kilograms per lane mile" id="_8745"/>
                <xs:enumeration value="tons per lane mile" id="_8746"/>
                <xs:enumeration value="dollar" id="_8747"/>
                <xs:enumeration value="percent" id="_8748"/>
                <xs:enumeration value="time delimiter" id="_8749"/>
                <xs:enumeration value="dollars" id="_8750"/>
                <xs:enumeration value="flight number" id="_8751"/>
                <xs:enumeration value="person people" id="_8752"/>
                <xs:enumeration value="response plan" id="_8753"/>
                <xs:enumeration value="placard type" id="_8754"/>
                <xs:enumeration value="placard number" id="_8755"/>
                <xs:enumeration value="fM" id="_8756"/>
            </xs:restriction>
        </xs:simpleType >
```

```
        <xs:simpleType>
           <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="local:Units" />
        </xs:simpleType>
     </xs:union>
</xs:simpleType>
```

In addition, this item may be used by data structures in other ITS standards.

6.39 Data Element: DE_Unusual Driving

Use: The ITIS enumeration list commonly refered to as "Unusual Driving," is assigned the upper byte value of [07] (which provides for value ranges from 1792 to 2047, inclusive). This list is formally called "UnusualDriving" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 8 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 119 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 1920).

ASN.1 Representation:
```
UnusualDriving ::= ENUMERATED  {
   vehicle-traveling-wrong-way       (1793),
   reckless-driver                   (1794),  -- Alternative Rendering:  erratic driver
   prohibited-vehicle-on-roadway     (1795),
   emergency-vehicles-on-roadway     (1796),
   high-speed-emergency-vehicles     (1797),
   high-speed-chase                  (1798),
   -- Cancel Types
   dangerous-vehicle-warning-cleared (1918),
   emergency-vehicle-warning-cleared (1919),
   ... -- # LOCAL_CONTENT_ITIS
   }
```

XML Representation:
```
<xs:simpleType name="UnusualDriving" >
     <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="1792"/>
              <xs:maxInclusive value="2047"/>
           </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
           <xs:restriction base="xs:string">
             <xs:enumeration value="vehicle traveling wrong way" id="_1793"/>
             <xs:enumeration value="reckless driver" id="_1794"/>
             <xs:enumeration value="prohibited vehicle on roadway" id="_1795"/>
             <xs:enumeration value="emergency vehicles on roadway" id="_1796"/>
             <xs:enumeration value="high speed emergency vehicles" id="_1797"/>
             <xs:enumeration value="high speed chase" id="_1798"/>
             <xs:enumeration value="dangerous vehicle warning cleared" id="_1918"/>
             <xs:enumeration value="emergency vehicle warning cleared" id="_1919"/>
           </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
           <xs:restriction base="xs:string">
             <xs:pattern value="\[.+\].*"/>
           </xs:restriction>
        </xs:simpleType>
```

```
                <xs:simpleType>
                    <xs:restriction base="local:UnusualDriving" />
                </xs:simpleType>
         </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.40 Data Element: DE_Vehicle Groups Affected

Use: The ITIS enumeration list commonly refered to as "Vehicle Groups Affected," is assigned the upper byte value of [36] (which provides for value ranges from 9216 to 9471, inclusive). This list is formally called "VehicleGroupAffected" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 35 different phrases. The remaining 92 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 9344).

ASN.1 Representation:
```
VehicleGroupAffected ::= ENUMERATED  {
    all-vehicles                            (9217),
    bicycles                                (9218),
    motorcycles                             (9219),  -- to include mopeds as well
    cars                                    (9220),  -- (remapped from ERM value of
                                                     -- zero)
    light-vehicles                          (9221),
    cars-and-light-vehicles                 (9222),
    cars-with-trailers                      (9223),
    cars-with-recreational-trailers         (9224),
    vehicles-with-trailers                  (9225),
    heavy-vehicles                          (9226),
    trucks                                  (9227),
    buses                                   (9228),
    articulated-buses                       (9229),
    school-buses                            (9230),
    vehicles-with-semi-trailers             (9231),
    vehicles-with-double-trailers           (9232),  -- Alternative Rendering:  western
                                                     -- doubles
    high-profile-vehicles                   (9233),
    wide-vehicles                           (9234),
    long-vehicles                           (9235),
    hazardous-loads                         (9236),
    exceptional-loads                       (9237),
    abnormal-loads                          (9238),
    convoys                                 (9239),
    maintenance-vehicles                    (9240),
    delivery-vehicles                       (9241),
    vehicles-with-even-numbered-license-plates (9242),
    vehicles-with-odd-numbered-license-plates  (9243),
    vehicles-with-parking-permits           (9244),
    vehicles-with-catalytic-converters      (9245),
    vehicles-without-catalytic-converters   (9246),
    gas-powered-vehicles                    (9247),
    diesel-powered-vehicles                 (9248),
    lPG-vehicles                            (9249),
    military-convoys                        (9250),
    military-vehicles                       (9251),
    ... -- # LOCAL_CONTENT_ITIS
    }
    -- Classification of vehicles and types of transport
```

XML Representation:

```xml
<xs:simpleType name="VehicleGroupAffected" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="9216"/>
                <xs:maxInclusive value="9471"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="all vehicles" id="_9217"/>
                <xs:enumeration value="bicycles" id="_9218"/>
                <xs:enumeration value="motorcycles" id="_9219"/>
                <xs:enumeration value="cars" id="_9220"/>
                <xs:enumeration value="light vehicles" id="_9221"/>
                <xs:enumeration value="cars and light vehicles" id="_9222"/>
                <xs:enumeration value="cars with trailers" id="_9223"/>
                <xs:enumeration value="cars with recreational trailers" id="_9224"/>
                <xs:enumeration value="vehicles with trailers" id="_9225"/>
                <xs:enumeration value="heavy vehicles" id="_9226"/>
                <xs:enumeration value="trucks" id="_9227"/>
                <xs:enumeration value="buses" id="_9228"/>
                <xs:enumeration value="articulated buses" id="_9229"/>
                <xs:enumeration value="school buses" id="_9230"/>
                <xs:enumeration value="vehicles with semi trailers" id="_9231"/>
                <xs:enumeration value="vehicles with double trailers" id="_9232"/>
                <xs:enumeration value="high profile vehicles" id="_9233"/>
                <xs:enumeration value="wide vehicles" id="_9234"/>
                <xs:enumeration value="long vehicles" id="_9235"/>
                <xs:enumeration value="hazardous loads" id="_9236"/>
                <xs:enumeration value="exceptional loads" id="_9237"/>
                <xs:enumeration value="abnormal loads" id="_9238"/>
                <xs:enumeration value="convoys" id="_9239"/>
                <xs:enumeration value="maintenance vehicles" id="_9240"/>
                <xs:enumeration value="delivery vehicles" id="_9241"/>
                <xs:enumeration value="vehicles with even numbered license plates" id="_9242"/>
                <xs:enumeration value="vehicles with odd numbered license plates" id="_9243"/>
                <xs:enumeration value="vehicles with parking permits" id="_9244"/>
                <xs:enumeration value="vehicles with catalytic converters" id="_9245"/>
                <xs:enumeration value="vehicles without catalytic converters" id="_9246"/>
                <xs:enumeration value="gas powered vehicles" id="_9247"/>
                <xs:enumeration value="diesel powered vehicles" id="_9248"/>
                <xs:enumeration value="lPG vehicles" id="_9249"/>
                <xs:enumeration value="military convoys" id="_9250"/>
                <xs:enumeration value="military vehicles" id="_9251"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:VehicleGroupAffected" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.41 Data Element: DE_Visibility & Air Quality

Use: The ITIS enumeration list commonly refered to as "Visibility & Air Quality," is assigned the upper byte value of [21] (which provides for value ranges from 5376 to 5631, inclusive). This list is formally called "VisibilityAndAirQuality" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 34 different phrases, divided into 3 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 93 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 5504).

ASN.1 Representation:
```
VisibilityAndAirQuality ::= ENUMERATED  {
    -- Visibility
    dense-fog                (5377),  -- This index is not to be used as a default value
                                      -- for this category
    fog                      (5378),
    patchy-fog               (5379),
    freezing-fog             (5380),
    ice-fog                  (5405),  -- Different than freezing fog, ice fog occurs well
                                      -- below freezing temps and is quite common in the
                                      -- Fairbanks area.
    mist                     (5381),
    haze                     (5382),
    visibility-reduced       (5383),
    visibility-blocked       (5404),  -- Used when signs, trees, etc., block the view
    white-out                (5384),  -- Alternative Rendering:  Snow glare
    blowing-snow             (5385),
    smoke-hazard             (5386),
    spray-hazard             (5387),
    low-sun-glare            (5388),  -- Do not use for snow glare
    snow-glare               (5389),
    blowing-dust             (5390),
    blowing-sand             (5391),  -- Hint: dune accumulations
    dust-storms              (5392),
    sandstorms               (5393),
    -- Air Quality
    air-quality-good         (5394),
    air-quality-fair         (5395),
    air-quality-poor         (5396),
    air-quality-very-poor    (5397),
    severe-exhaust-pollution (5398),
    smog-alert               (5399),
    pollen-count-high        (5400),
    pollen-count-medium      (5401),
    pollen-count-low         (5402),
    swarms-of-insects        (5403),
    -- Cancel Types
    fog-clearing             (5499),
    visibility-improved      (5500),
    fog-forecast-withdrawn   (5501),
    pollution-alert-ended    (5502),
    air-quality-improved     (5503),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```
<xs:simpleType name="VisibilityAndAirQuality" >
    <xs:union>
        <xs:simpleType>
           <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="5376"/>
              <xs:maxInclusive value="5631"/>
           </xs:restriction>
```

```
            </xs:simpleType>
            <xs:simpleType>
               <xs:restriction base="xs:string">
                  <xs:enumeration value="dense fog" id="_5377"/>
                  <xs:enumeration value="fog" id="_5378"/>
                  <xs:enumeration value="patchy fog" id="_5379"/>
                  <xs:enumeration value="freezing fog" id="_5380"/>
                  <xs:enumeration value="ice fog" id="_5405"/>
                  <xs:enumeration value="mist" id="_5381"/>
                  <xs:enumeration value="haze" id="_5382"/>
                  <xs:enumeration value="visibility reduced" id="_5383"/>
                  <xs:enumeration value="visibility blocked" id="_5404"/>
                  <xs:enumeration value="white out" id="_5384"/>
                  <xs:enumeration value="blowing snow" id="_5385"/>
                  <xs:enumeration value="smoke hazard" id="_5386"/>
                  <xs:enumeration value="spray hazard" id="_5387"/>
                  <xs:enumeration value="low sun glare" id="_5388"/>
                  <xs:enumeration value="snow glare" id="_5389"/>
                  <xs:enumeration value="blowing dust" id="_5390"/>
                  <xs:enumeration value="blowing sand" id="_5391"/>
                  <xs:enumeration value="dust storms" id="_5392"/>
                  <xs:enumeration value="sandstorms" id="_5393"/>
                  <xs:enumeration value="air quality good" id="_5394"/>
                  <xs:enumeration value="air quality fair" id="_5395"/>
                  <xs:enumeration value="air quality poor" id="_5396"/>
                  <xs:enumeration value="air quality very poor" id="_5397"/>
                  <xs:enumeration value="severe exhaust pollution" id="_5398"/>
                  <xs:enumeration value="smog alert" id="_5399"/>
                  <xs:enumeration value="pollen count high" id="_5400"/>
                  <xs:enumeration value="pollen count medium" id="_5401"/>
                  <xs:enumeration value="pollen count low" id="_5402"/>
                  <xs:enumeration value="swarms of insects" id="_5403"/>
                  <xs:enumeration value="fog clearing" id="_5499"/>
                  <xs:enumeration value="visibility improved" id="_5500"/>
                  <xs:enumeration value="fog forecast withdrawn" id="_5501"/>
                  <xs:enumeration value="pollution alert ended" id="_5502"/>
                  <xs:enumeration value="air quality improved" id="_5503"/>
               </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
               <xs:restriction base="xs:string">
                  <xs:pattern value="\[.+\]*"/>
               </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
               <xs:restriction base="local:VisibilityAndAirQuality" />
            </xs:simpleType>
         </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.42 Data Element: DE_Warning Advice

Use: The ITIS enumeration list commonly refered to as "Warning Advice," is assigned the upper byte value of [27] (which provides for value ranges from 6912 to 7167, inclusive). This list is formally called "WarningAdvice" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 32 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 95 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 7040).

ASN.1 Representation:

```
WarningAdvice ::= ENUMERATED  {
    risk                                    (6913),  -- Conditions are more likely
                                                     -- than "normal"
    watch                                   (6914),  -- Conditions are favorable for
                                                     -- an event to occur
    warning                                 (6915),  -- An event has occurred but is
                                                     -- not (yet) near
    alert                                   (6916),  -- An event has occurred and it
                                                     -- is near
    danger                                  (6917),
    danger-of-explosion                     (6918),
    danger-of-fire                          (6919),
    extra-police-patrols-in-operation       (6920),
    look-out-for-vehicles-stopped-under-bridges (6921),
    increased-risk-of-accident              (6922),
    rescue-and-recovery-work-in-progress-at-scene (6923),
    police-at-scene                         (6924),
    emergency-vehicles-at-scene             (6925),
    traffic-being-directed-around-accident-area (6926),
    police-directing-traffic                (6927),
    rescue-workers-directing-traffic        (6928),
    repairs-in-progress                     (6929),
    pilot-car-in-operation                  (6930),
    look-out-for-flagger                    (6931),  -- Alternative Rendering:  look
                                                     -- out for flagman
    police-checks-in-operation              (6932),  -- Hint: all types of checks
    truck-check-point                       (6937),
    lockdown                                (6935),
    security-check-point                    (6936),
    single-occupancy-vehicle-check-point    (6938),
    mandatory-speed-limit-in-force          (6933),
    speed-limit-in-force-for-heavy-vehicles (6934),
    -- Cancel Types
    warning-canceled                        (7034),  -- Canceling a warning may
                                                     -- "revert" to a watch
    watch-canceled                          (7035),
    alert-canceled                          (7036),  -- Canceling an alert may
                                                     -- "revert" to a warning
    ended                                   (7037),  -- Hint: used for many sporting
                                                     -- / special events
    cleared                                 (7038),
    canceled                                (7039),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:

```
<xs:simpleType name="WarningAdvice" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="6912"/>
                <xs:maxInclusive value="7167"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="risk" id="_6913"/>
                <xs:enumeration value="watch" id="_6914"/>
                <xs:enumeration value="warning" id="_6915"/>
                <xs:enumeration value="alert" id="_6916"/>
                <xs:enumeration value="danger" id="_6917"/>
                <xs:enumeration value="danger of explosion" id="_6918"/>
                <xs:enumeration value="danger of fire" id="_6919"/>
                <xs:enumeration value="extra police patrols in operation" id="_6920"/>
                <xs:enumeration value="look out for vehicles stopped under bridges" id="_6921"/>
                <xs:enumeration value="increased risk of accident" id="_6922"/>
                <xs:enumeration value="rescue and recovery work in progress at scene" id="_6923"/>
                <xs:enumeration value="police at scene" id="_6924"/>
                <xs:enumeration value="emergency vehicles at scene" id="_6925"/>
```

```
                    <xs:enumeration value="traffic being directed around accident area" id="_6926"/>
                    <xs:enumeration value="police directing traffic" id="_6927"/>
                    <xs:enumeration value="rescue workers directing traffic" id="_6928"/>
                    <xs:enumeration value="repairs in progress" id="_6929"/>
                    <xs:enumeration value="pilot car in operation" id="_6930"/>
                    <xs:enumeration value="look out for flagger" id="_6931"/>
                    <xs:enumeration value="police checks in operation" id="_6932"/>
                    <xs:enumeration value="truck check point" id="_6937"/>
                    <xs:enumeration value="lockdown" id="_6935"/>
                    <xs:enumeration value="security check point" id="_6936"/>
                    <xs:enumeration value="single occupancy vehicle check point" id="_6938"/>
                    <xs:enumeration value="mandatory speed limit in force" id="_6933"/>
                    <xs:enumeration value="speed limit in force for heavy vehicles" id="_6934"/>
                    <xs:enumeration value="warning canceled" id="_7034"/>
                    <xs:enumeration value="watch canceled" id="_7035"/>
                    <xs:enumeration value="alert canceled" id="_7036"/>
                    <xs:enumeration value="ended" id="_7037"/>
                    <xs:enumeration value="cleared" id="_7038"/>
                    <xs:enumeration value="canceled" id="_7039"/>
                </xs:restriction>
            </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:WarningAdvice" />
        </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.43 Data Element: DE_Weather Conditions

Use: The ITIS enumeration list commonly refered to as "Weather Conditions," is assigned the upper byte value of [18] (which provides for value ranges from 4608 to 4863, inclusive). This list is formally called "WeatherConditions" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 28 different phrases, divided into 3 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 99 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 4736).

ASN.1 Representation:
```
WeatherConditions ::= ENUMERATED {
    -- General Weather
    overcast                (4609),   -- This index is not to be used as a default value
                                      -- for this category
    cloudy                  (4610),
    mostly-cloudy           (4611),
    partly-cloudy           (4612),
    partly-sunny            (4613),
    mostly-sunny            (4614),
    sunny                   (4615),
    fair-skies              (4616),
    clear-skies             (4617),
    mostly-clear            (4618),
    mostly-dry              (4619),
    dry                     (4620),
    uV-index-very-high      (4621),
    uV-index-high           (4622),
    uV-index-moderate       (4623),
    uV-index-low            (4624),
```

```
uV-index-very-low          (4625),
barometric-pressure        (4626),  -- Typically followed by a number and value
ozone-alert                (4627),
-- Lighting Types
lighting-unknown           (4628),  -- NEW: Added March 2005
artificial-exterior-light  (4629),  -- NEW: Added March 2005
artificial-interior-light  (4630),  -- NEW: Added March 2005
darkness                   (4631),  -- NEW: Added March 2005 Also used when not
                                    -- lighted
dusk                       (4632),  -- NEW: Added March 2005
dawn                       (4633),  -- NEW: Added March 2005
moonlight                  (4634),  -- NEW: Added March 2005
daylight                   (4635),  -- NEW: Added March 2005
-- Cancel Types
weather-forecast-withdrawn (4735),
... -- # LOCAL_CONTENT_ITIS
}
```

XML Representation:

```xml
<xs:simpleType name="WeatherConditions" >
    <xs:union>
       <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="4608"/>
             <xs:maxInclusive value="4863"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="overcast" id="_4609"/>
             <xs:enumeration value="cloudy" id="_4610"/>
             <xs:enumeration value="mostly cloudy" id="_4611"/>
             <xs:enumeration value="partly cloudy" id="_4612"/>
             <xs:enumeration value="partly sunny" id="_4613"/>
             <xs:enumeration value="mostly sunny" id="_4614"/>
             <xs:enumeration value="sunny" id="_4615"/>
             <xs:enumeration value="fair skies" id="_4616"/>
             <xs:enumeration value="clear skies" id="_4617"/>
             <xs:enumeration value="mostly clear" id="_4618"/>
             <xs:enumeration value="mostly dry" id="_4619"/>
             <xs:enumeration value="dry" id="_4620"/>
             <xs:enumeration value="uV index very high" id="_4621"/>
             <xs:enumeration value="uV index high" id="_4622"/>
             <xs:enumeration value="uV index moderate" id="_4623"/>
             <xs:enumeration value="uV index low" id="_4624"/>
             <xs:enumeration value="uV index very low" id="_4625"/>
             <xs:enumeration value="barometric pressure" id="_4626"/>
             <xs:enumeration value="ozone alert" id="_4627"/>
             <xs:enumeration value="lighting unknown" id="_4628"/>
             <xs:enumeration value="artificial exterior light" id="_4629"/>
             <xs:enumeration value="artificial interior light" id="_4630"/>
             <xs:enumeration value="darkness" id="_4631"/>
             <xs:enumeration value="dusk" id="_4632"/>
             <xs:enumeration value="dawn" id="_4633"/>
             <xs:enumeration value="moonlight" id="_4634"/>
             <xs:enumeration value="daylight" id="_4635"/>
             <xs:enumeration value="weather forecast withdrawn" id="_4735"/>
          </xs:restriction>
       </xs:simpleType >
       <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
       </xs:simpleType>
       <xs:simpleType>
          <xs:restriction base="local:WeatherConditions" />
       </xs:simpleType>
    </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.44 Data Element: DE_Winds

Use: The ITIS enumeration list commonly refered to as "Winds," is assigned the upper byte value of [20] (which provides for value ranges from 5120 to 5375, inclusive). This list is formally called "Winds" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 15 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 112 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 5248).

ASN.1 Representation:
```
Winds ::= ENUMERATED  {
    tornado                         (5121),  -- Note that this can be combined with "alert"
                                             -- "warning" etc.  This index is not to be
                                             -- used as a default value for this category
    hurricane                       (5122),
    hurricane-force-winds           (5123),
    tropical-storm                  (5124),
    gale-force-winds                (5125),
    storm-force-winds               (5126),
    strong-winds                    (5127),
    moderate-winds                  (5128),
    light-winds                     (5129),
    calm                            (5130),
    gusty-winds                     (5131),
    crosswinds                      (5132),
    windy                           (5133),
    -- Cancel Types
    strong-winds-have-eased         (5246),
    strong-wind-forecast-withdrawn  (5247),
    ... -- # LOCAL_CONTENT_ITIS
    }
```

XML Representation:
```xml
<xs:simpleType name="Winds" >
    <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="5120"/>
                <xs:maxInclusive value="5375"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="tornado" id="_5121"/>
                <xs:enumeration value="hurricane" id="_5122"/>
                <xs:enumeration value="hurricane force winds" id="_5123"/>
                <xs:enumeration value="tropical storm" id="_5124"/>
                <xs:enumeration value="gale force winds" id="_5125"/>
                <xs:enumeration value="storm force winds" id="_5126"/>
                <xs:enumeration value="strong winds" id="_5127"/>
                <xs:enumeration value="moderate winds" id="_5128"/>
                <xs:enumeration value="light winds" id="_5129"/>
                <xs:enumeration value="calm" id="_5130"/>
                <xs:enumeration value="gusty winds" id="_5131"/>
                <xs:enumeration value="crosswinds" id="_5132"/>
                <xs:enumeration value="windy" id="_5133"/>
                <xs:enumeration value="strong winds have eased" id="_5246"/>
                <xs:enumeration value="strong wind forecast withdrawn" id="_5247"/>
            </xs:restriction>
        </xs:simpleType >
```

```
      <xs:simpleType>
         <xs:restriction base="xs:string">
            <xs:pattern value="\[.+\].*"/>
         </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
         <xs:restriction base="local:Winds" />
      </xs:simpleType>
   </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.45 Data Element: DE_Winter Driving Index

Use: The ITIS enumeration list commonly refered to as "Winter Driving Index," is assigned the upper byte value of [25] (which provides for value ranges from 6400 to 6655, inclusive). This list is formally called "WinterDrivingIndex" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 6 different phrases. The remaining 121 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 6528).

ASN.1 Representation:
```
WinterDrivingIndex ::= ENUMERATED  {
   driving-conditions-good                 (6401),
   driving-conditions-fair                 (6402),
   difficult-driving-conditions            (6403),
   very-difficult-driving-conditions       (6404),
   hazardous-driving-conditions            (6405),
   extremely-hazardous-driving-conditions  (6406),
   ... -- # LOCAL_CONTENT_ITIS
   }
   -- See also the restriction list for phrase items such as chains required
```

XML Representation:
```
<xs:simpleType name="WinterDrivingIndex" >
   <xs:union>
      <xs:simpleType>
         <xs:restriction base="xs:unsignedInt">
            <xs:minInclusive value="6400"/>
            <xs:maxInclusive value="6655"/>
         </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
         <xs:restriction base="xs:string">
            <xs:enumeration value="driving conditions good" id="_6401"/>
            <xs:enumeration value="driving conditions fair" id="_6402"/>
            <xs:enumeration value="difficult driving conditions" id="_6403"/>
            <xs:enumeration value="very difficult driving conditions" id="_6404"/>
            <xs:enumeration value="hazardous driving conditions" id="_6405"/>
            <xs:enumeration value="extremely hazardous driving conditions" id="_6406"/>
         </xs:restriction>
      </xs:simpleType >
      <xs:simpleType>
         <xs:restriction base="xs:string">
            <xs:pattern value="\[.+\].*"/>
         </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
         <xs:restriction base="local:WinterDrivingIndex" />
      </xs:simpleType>
   </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

6.46 Data Element: DE_Winter Driving Restrictions and Recommendations

Use: The ITIS enumeration list commonly refered to as "Winter Driving Restrictions and Recommendations," is assigned the upper byte value of [24] (which provides for value ranges from 6144 to 6399, inclusive). This list is formally called "WinterDrivingRestrictions" in the ASN.1 and XML productions. Items from this enumeration list can be used as an event category classification. This list contains a total of 13 different phrases, divided into 2 further sub-categories (the division into these sub-categories is informational only and other groupings may also be used). The remaining 114 values up to the lower byte value of [127] are reserved for additional "national" phrases in this byte range. Local phrases may be added to the list starting with the lower byte value of 128 and proceeding upward from there (in other words, the first value assigned for any local additions to this list would be given the value 6272).

ASN.1 Representation:
```
WinterDrivingRestrictions ::= ENUMERATED  {
   winter-equipment-recommended       (6145),
   winter-equipment-required          (6146),
   snow-chains-recommended            (6147),
   snow-chains-required               (6148),
   snow-chains-prohibited             (6149),
   studded-tires-prohibited           (6150),
   snow-tires-recommended             (6151),
   snow-tires-required                (6152),
   four-wheel-drive-recommended       (6153),
   four-wheel-drive-required          (6154),
   snow-tires-or-chains-recommended   (6155),
   snow-tires-or-chains-required      (6156),
   -- Cancel Types
   winter-driving-requirements-lifted (6157),
   ... -- # LOCAL_CONTENT_ITIS
   }
```

XML Representation:
```
<xs:simpleType name="WinterDrivingRestrictions" >
    <xs:union>
        <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
             <xs:minInclusive value="6144"/>
             <xs:maxInclusive value="6399"/>
          </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:enumeration value="winter equipment recommended" id="_6145"/>
             <xs:enumeration value="winter equipment required" id="_6146"/>
             <xs:enumeration value="snow chains recommended" id="_6147"/>
             <xs:enumeration value="snow chains required" id="_6148"/>
             <xs:enumeration value="snow chains prohibited" id="_6149"/>
             <xs:enumeration value="studded tires prohibited" id="_6150"/>
             <xs:enumeration value="snow tires recommended" id="_6151"/>
             <xs:enumeration value="snow tires required" id="_6152"/>
             <xs:enumeration value="four wheel drive recommended" id="_6153"/>
             <xs:enumeration value="four wheel drive required" id="_6154"/>
             <xs:enumeration value="snow tires or chains recommended" id="_6155"/>
             <xs:enumeration value="snow tires or chains required" id="_6156"/>
             <xs:enumeration value="winter driving requirements lifted" id="_6157"/>
          </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
          <xs:restriction base="xs:string">
             <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
        </xs:simpleType>
```

```
                <xs:simpleType>
                    <xs:restriction base="local:WinterDrivingRestrictions" />
                </xs:simpleType>
            </xs:union>
</xs:simpleType>
```

Used by: This entry is used directly by one other data structure in this standard, a DF called DF_ITIS_EventType <ASN> <XML>. In addition, this item may be used by data structures in other ITS standards.

7. Data Frame Defintions

Data frames defined in this standard shall consist of the following data frames. Each shall be further divided into specific elements as defined in this clause. Typically, these entries shall be made up of message content internal to this document (made up of DEs that are either atomic or complex) and message content external to this document (from other functional areas and companion volumes). Definitions for these entries are presented in the following subclauses.

The productions of ASN.1 which follows shall be considered normative in nature. While the majority of the normative content is reflected in the actual syntax of the ASN.1 some entries also have additional statements in the ASN.1 comments which shall be considered to be normative as well. In addition, the commentary provided with each entry may also provide additional normative restrictions on the proper use of the entry which shall be followed. The XML productions follow directly from the ASN.1 specifications and the same rules shall be applied.

7.1 Data Frame: DF_ITIS_EventType

Use: The summary data structure of all ITIS codes which can be used to form event categories. Taken from the larger set of complete ITIS codes. A code which identifies the type of event. This is taken from the 40-odd sub ranges of ITIS codes, and often used as a way to provide a top level sorting of the event type. Note that the XML formation provides an outer tag which denotes the category from which the inner element phrase was taken, this is in contrast to the more common way of using the phrases inside the <ITIS> tag. Note the exact spelling of the tags!

ASN.1 Representation:
```
ITISEventType ::= CHOICE  {
    trafficConditions               TrafficConditions,
    accidentsAndIncidents           AccidentsAndIncidents,
    closures                        Closures,
    roadwork                        Roadwork,
    obstruction                     Obstruction,
    delayStatusCancellation         DelayStatusCancellation,
    unusualDriving                  UnusualDriving,
    mobileSituation                 MobileSituation,
    deviceStatus                    DeviceStatus,
    restrictionClass                RestrictionClass,
    incidentResponseStatus          IncidentResponseStatus,
    disasters                       Disasters,
    disturbances                    Disturbances,
    sportingEvents                  SportingEvents,
    specialEvents                   SpecialEvents,
    parkingInformation              ParkingInformation,
    systemInformation               SystemInformation,
    weatherConditions               WeatherConditions,
    precipitation                   Precipitation,
    winds                           Winds,
    visibilityAndAirQuality         VisibilityAndAirQuality,
    temperature                     Temperature,
    pavementConditions              PavementConditions,
    winterDrivingRestrictions       WinterDrivingRestrictions,
```

```
    winterDrivingIndex                WinterDrivingIndex,
    suggestionAdvice                  SuggestionAdvice,
    warningAdvice                     WarningAdvice,
    adviceInstructionsRecommendations AdviceInstructionsRecommendations,
    adviceInstructionsMandatory       AdviceInstructionsMandatory,
    laneRoadway                       LaneRoadway,
    alternateRoute                    AlternateRoute,
    transitMode                       TransitMode,
    vehicleGroupAffected              VehicleGroupAffected,
    travelerGroupAffected             TravelerGroupAffected,
    responderGroupAffected            ResponderGroupAffected,
    incidentResponseEquipment         IncidentResponseEquipment,
    transitOperations                 TransitOperations,
    }
    -- the set of  ITIS.ITISgroups
    -- a single code representing the top level grouping of ITIS sub-groups
```

XML Representation:
```xml
<xs:complexType name="ITISEventType" >
     <xs:annotation>
         <xs:documentation>
            the set of  ITIS.ITISgroups
            a single code representing the top level grouping of ITIS sub-groups
            surrounded by the element tag of its sub group
         </xs:documentation>
     </xs:annotation>
     <xs:choice>
        <xs:element name="trafficConditions" type="TrafficConditions" />
        <xs:element name="accidentsAndIncidents" type="AccidentsAndIncidents" />
        <xs:element name="closures" type="Closures" />
        <xs:element name="roadwork" type="Roadwork" />
        <xs:element name="obstruction" type="Obstruction" />
        <xs:element name="delayStatusCancellation" type="DelayStatusCancellation" />
        <xs:element name="unusualDriving" type="UnusualDriving" />
        <xs:element name="mobileSituation" type="MobileSituation" />
        <xs:element name="deviceStatus" type="DeviceStatus" />
        <xs:element name="restrictionClass" type="RestrictionClass" />
        <xs:element name="incidentResponseStatus" type="IncidentResponseStatus" />
        <xs:element name="disasters" type="Disasters" />
        <xs:element name="disturbances" type="Disturbances" />
        <xs:element name="sportingEvents" type="SportingEvents" />
        <xs:element name="specialEvents" type="SpecialEvents" />
        <xs:element name="parkingInformation" type="ParkingInformation" />
        <xs:element name="systemInformation" type="SystemInformation" />
        <xs:element name="weatherConditions" type="WeatherConditions" />
        <xs:element name="precipitation" type="Precipitation" />
        <xs:element name="winds" type="Winds" />
        <xs:element name="visibilityAndAirQuality" type="VisibilityAndAirQuality" />
        <xs:element name="temperature" type="Temperature" />
        <xs:element name="pavementConditions" type="PavementConditions" />
        <xs:element name="winterDrivingRestrictions" type="WinterDrivingRestrictions" />
        <xs:element name="winterDrivingIndex" type="WinterDrivingIndex" />
        <xs:element name="suggestionAdvice" type="SuggestionAdvice" />
        <xs:element name="warningAdvice" type="WarningAdvice" />
        <xs:element name="adviceInstructionsRecommendations" type="AdviceInstructionsRecommendations"
/>
        <xs:element name="adviceInstructionsMandatory" type="AdviceInstructionsMandatory" />
        <xs:element name="laneRoadway" type="LaneRoadway" />
        <xs:element name="alternateRoute" type="AlternateRoute" />
        <xs:element name="transitMode" type="TransitMode" />
        <xs:element name="vehicleGroupAffected" type="VehicleGroupAffected" />
        <xs:element name="travelerGroupAffected" type="TravelerGroupAffected" />
        <xs:element name="responderGroupAffected" type="ResponderGroupAffected" />
        <xs:element name="incidentResponseEquipment" type="IncidentResponseEquipment" />
        <xs:element name="transitOperations" type="TransitOperations" />
     </xs:choice>
</xs:complexType>
<!-- the set of  ITIS.ITISgroups
a single code representing the top level grouping of ITIS sub-groups
surrounded by the element tag of its sub group -->
```

7.2 Data Frame: DF_ITIS-Codes_And_Text

Use: The use of ITIS codes interspersed with free text. The complete set of ITIS codes can be found in Volume Two of the J2540 Standard. This is a set of nealry 1,500 items which are used to encode common events and list items in ITS.

ASN.1 Representation:
```
ITIScodesAndText ::= SEQUENCE (SIZE(1..100)) OF SEQUENCE {
  item CHOICE     {
      itis ITIScodes,
      text ITIStext
      } -- # UNTAGGED
  }
```

XML Representation:
```
<xs:complexType name="ITIScodesAndText" >
   <xs:sequence minOccurs="1" maxOccurs="100">
     <xs:choice >
        <xs:element name="itis" type="ITIScodes" />
        <xs:element name="text" type="ITIStext" />
     </xs:choice>
   </xs:sequence>
</xs:complexType>
```

8. Notes

8.1 Marginal Indicia

The change bar (l) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

PREPARED BY THE SAE ADVANCED TRAVELER INFORMATION SYSTEMS COMMITTEE
OF THE SAE VEHICLE SYSTEMS GROUP

APPENDIX A - XML Source Listings

The following listing has been compiled and validated, and is taken directly from the listing provided by each entry above. This information can also be obtained on-line from the repository of ITS schema sets found at http://www.itsware.net/ITSschemas/ReadMe.htm   This specific schema release is designated as "03-00-02" and can be found in the repository at http://www.itsware.net/ITSschemas/itis/ITIS-03-00-02/

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!-- Output of XML portions of the registry data into file: ITIS-Draft-03-00-02.xsd -->
<!-- Run on Mini-Edit [Version 2.1.441] -->
<!-- From node C:136-5448-3969 Created on 10/20/2006 at 3:47:09 PM  -->
<!-- Source DB File: ITIS_Rev03_00_02.ITS rendered into namespace: ITIS  -->
<!-- Production releases of ITS schemas can be found at: http://www.itsware.net/ITSschemas/ReadMe.htm -
->

<!--  -->
<xs:schema targetNamespace="http://www.ITIS-Adopted-03-00-02"
   xmlns="http://www.ITIS-Adopted-03-00-02"
   xmlns:xs="http://www.w3.org/2001/XMLSchema"

xmlns:local="http://www.ITIS-Local-03-00-02"

   elementFormDefault="unqualified"
   attributeFormDefault="unqualified"
   version="Adopted">

<xs:import namespace="http://www.ITIS-Local-03-00-02" schemaLocation="ITIS-Local-03-00-02.xsd"/>


<xs:annotation>
   <xs:documentation>
      Exported on: 03:47:09 PM Friday, October 20, 2006 From file: ITIS_Rev03_00_02.ITS [By: Mini-Edit
Rev 2.1.441]
   </xs:documentation>
</xs:annotation>


<!-- Descriptive Name: DE_ITIS -->
<xs:simpleType name="ITIScodes">
   <xs:union memberTypes="TrafficConditions
   AccidentsAndIncidents
   Closures
   Roadwork Obstruction
   DelayStatusCancellation
   UnusualDriving
   MobileSituation
   DeviceStatus
   RestrictionClass
   IncidentResponseStatus
   Disasters
   Disturbances
   SportingEvents
   SpecialEvents
   ParkingInformation
   SystemInformation
   WeatherConditions
   Precipitation
   Winds
   VisibilityAndAirQuality
   Temperature
   PavementConditions
   WinterDrivingRestrictions
   WinterDrivingIndex
   SuggestionAdvice
```

```
    WarningAdvice
    AdviceInstructionsRecommendations
    AdviceInstructionsMandatory
    Qualifiers
    GenericLocations
    LaneRoadway
    AlternateRoute
    Units
    TransitMode
    VehicleGroupAffected
    TravelerGroupAffected
    ResponderGroupAffected
    IncidentResponseEquipment
    AssetStatus
    RoadsideAssets
    TransitOperations
    Objects"/>
</xs:simpleType>


<!-- Descriptive Name: DF_ITIS-Codes_And_Text -->
<xs:complexType name="ITIScodesAndText" >
    <xs:sequence minOccurs="1" maxOccurs="100">
        <xs:choice >
            <xs:element name="itis" type="ITIScodes" />
            <xs:element name="text" type="ITIStext" />
        </xs:choice>
    </xs:sequence>
</xs:complexType>

<!-- Descriptive Name: DF_ITIS_EventType -->
<xs:complexType name="ITISEventType" >
    <xs:annotation>
        <xs:documentation>
            the set of  ITIS.ITISgroups
            a single code representing the top level grouping of ITIS sub-groups
            surrounded by the element tag of its sub group
        </xs:documentation>
    </xs:annotation>
    <xs:choice>
        <xs:element name="trafficConditions" type="TrafficConditions" />
        <xs:element name="accidentsAndIncidents" type="AccidentsAndIncidents" />
        <xs:element name="closures" type="Closures" />
        <xs:element name="roadwork" type="Roadwork" />
        <xs:element name="obstruction" type="Obstruction" />
        <xs:element name="delayStatusCancellation" type="DelayStatusCancellation" />
        <xs:element name="unusualDriving" type="UnusualDriving" />
        <xs:element name="mobileSituation" type="MobileSituation" />
        <xs:element name="deviceStatus" type="DeviceStatus" />
        <xs:element name="restrictionClass" type="RestrictionClass" />
        <xs:element name="incidentResponseStatus" type="IncidentResponseStatus" />
        <xs:element name="disasters" type="Disasters" />
        <xs:element name="disturbances" type="Disturbances" />
        <xs:element name="sportingEvents" type="SportingEvents" />
        <xs:element name="specialEvents" type="SpecialEvents" />
        <xs:element name="parkingInformation" type="ParkingInformation" />
        <xs:element name="systemInformation" type="SystemInformation" />
        <xs:element name="weatherConditions" type="WeatherConditions" />
        <xs:element name="precipitation" type="Precipitation" />
        <xs:element name="winds" type="Winds" />
        <xs:element name="visibilityAndAirQuality" type="VisibilityAndAirQuality" />
        <xs:element name="temperature" type="Temperature" />
        <xs:element name="pavementConditions" type="PavementConditions" />
        <xs:element name="winterDrivingRestrictions" type="WinterDrivingRestrictions" />
        <xs:element name="winterDrivingIndex" type="WinterDrivingIndex" />
        <xs:element name="suggestionAdvice" type="SuggestionAdvice" />
        <xs:element name="warningAdvice" type="WarningAdvice" />
        <xs:element name="adviceInstructionsRecommendations" type="AdviceInstructionsRecommendations"
/>
        <xs:element name="adviceInstructionsMandatory" type="AdviceInstructionsMandatory" />
        <xs:element name="laneRoadway" type="LaneRoadway" />
        <xs:element name="alternateRoute" type="AlternateRoute" />
```

```xml
                <xs:element name="transitMode" type="TransitMode" />
                <xs:element name="vehicleGroupAffected" type="VehicleGroupAffected" />
                <xs:element name="travelerGroupAffected" type="TravelerGroupAffected" />
                <xs:element name="responderGroupAffected" type="ResponderGroupAffected" />
                <xs:element name="incidentResponseEquipment" type="IncidentResponseEquipment" />
                <xs:element name="transitOperations" type="TransitOperations" />
            </xs:choice>
    </xs:complexType>
<!-- the set of  ITIS.ITISgroups
a single code representing the top level grouping of ITIS sub-groups
surrounded by the element tag of its sub group -->


<!-- Descriptive Name: DE_Accidents-and-Incidents -->
<xs:simpleType name="AccidentsAndIncidents" >
        <xs:union>
            <xs:simpleType>
                <xs:restriction base="xs:unsignedInt">
                    <xs:minInclusive value="512"/>
                    <xs:maxInclusive value="767"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="accident" id="_513"/>
                    <xs:enumeration value="serious accident" id="_514"/>
                    <xs:enumeration value="injury accident" id="_515"/>
                    <xs:enumeration value="minor accident" id="_516"/>
                    <xs:enumeration value="multi vehicle accident" id="_517"/>
                    <xs:enumeration value="numerous accidents" id="_518"/>
                    <xs:enumeration value="accident involving a bicycle" id="_519"/>
                    <xs:enumeration value="accident involving a bus" id="_520"/>
                    <xs:enumeration value="accident involving a motorcycle" id="_521"/>
                    <xs:enumeration value="accident involving a pedestrian" id="_522"/>
                    <xs:enumeration value="accident involving a train" id="_523"/>
                    <xs:enumeration value="accident involving a truck" id="_524"/>
                    <xs:enumeration value="accident involving a semi trailer" id="_562"/>
                    <xs:enumeration value="accident involving hazardous materials" id="_525"/>
                    <xs:enumeration value="earlier accident" id="_526"/>
                    <xs:enumeration value="medical emergency" id="_527"/>
                    <xs:enumeration value="secondary accident" id="_528"/>
                    <xs:enumeration value="rescue and recovery work REMOVED" id="_529"/>
                    <xs:enumeration value="accident investigation work" id="_530"/>
                    <xs:enumeration value="incident" id="_531"/>
                    <xs:enumeration value="stalled vehicle" id="_532"/>
                    <xs:enumeration value="abandoned vehicle" id="_533"/>
                    <xs:enumeration value="disabled vehicle" id="_534"/>
                    <xs:enumeration value="disabled truck" id="_535"/>
                    <xs:enumeration value="disabled semi trailer" id="_536"/>
                    <xs:enumeration value="disabled bus" id="_537"/>
                    <xs:enumeration value="disabled train" id="_538"/>
                    <xs:enumeration value="vehicle spun out" id="_539"/>
                    <xs:enumeration value="vehicle on fire" id="_540"/>
                    <xs:enumeration value="vehicle in water" id="_541"/>
                    <xs:enumeration value="vehicles slowing to look at accident" id="_542"/>
                    <xs:enumeration value="jackknifed semi trailer" id="_543"/>
                    <xs:enumeration value="jackknifed trailer home" id="_544"/>
                    <xs:enumeration value="jackknifed trailer" id="_545"/>
                    <xs:enumeration value="spillage occurring from moving vehicle" id="_546"/>
                    <xs:enumeration value="acid spill" id="_547"/>
                    <xs:enumeration value="chemical spill" id="_548"/>
                    <xs:enumeration value="fuel spill" id="_549"/>
                    <xs:enumeration value="hazardous materials spill" id="_550"/>
                    <xs:enumeration value="oil spill" id="_551"/>
                    <xs:enumeration value="spilled load" id="_552"/>
                    <xs:enumeration value="toxic spill" id="_553"/>
                    <xs:enumeration value="overturned vehicle" id="_554"/>
                    <xs:enumeration value="overturned truck" id="_555"/>
                    <xs:enumeration value="overturned semi trailer" id="_556"/>
                    <xs:enumeration value="overturned bus" id="_557"/>
                    <xs:enumeration value="derailed train" id="_558"/>
                    <xs:enumeration value="stuck vehicle" id="_559"/>
```

```
              <xs:enumeration value="truck stuck under bridge" id="_560"/>
              <xs:enumeration value="bus stuck under bridge" id="_561"/>
              <xs:enumeration value="accident cleared" id="_638"/>
              <xs:enumeration value="incident cleared" id="_639"/>
          </xs:restriction>
      </xs:simpleType >
      <xs:simpleType>
          <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
          <xs:restriction base="local:AccidentsAndIncidents" />
      </xs:simpleType>
    </xs:union>
</xs:simpleType>

<!-- Descriptive Name: DE_Instructions-Mandatory -->
<xs:simpleType name="AdviceInstructionsMandatory" >
    <xs:union>
      <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
              <xs:minInclusive value="7424"/>
              <xs:maxInclusive value="7679"/>
          </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
          <xs:restriction base="xs:string">
              <xs:enumeration value="keep to the right" id="_7425"/>
              <xs:enumeration value="keep to the left" id="_7426"/>
              <xs:enumeration value="use right lane" id="_7427"/>
              <xs:enumeration value="use left lane" id="_7428"/>
              <xs:enumeration value="heavy vehicles use right lane" id="_7429"/>
              <xs:enumeration value="heavy vehicles use left lane" id="_7430"/>
              <xs:enumeration value="observe signals" id="_7431"/>
              <xs:enumeration value="observe signs" id="_7432"/>
              <xs:enumeration value="no passing" id="_7433"/>
              <xs:enumeration value="no smoking" id="_7434"/>
              <xs:enumeration value="no open flames" id="_7435"/>
              <xs:enumeration value="use shoulder as lane" id="_7436"/>
              <xs:enumeration value="do not drive on the shoulder" id="_7437"/>
              <xs:enumeration value="allow emergency vehicles to pass" id="_7438"/>
              <xs:enumeration value="clear a lane for emergency vehicles" id="_7439"/>
              <xs:enumeration value="pull over to the edge of the roadway" id="_7440"/>
              <xs:enumeration value="wait for escort vehicle" id="_7441"/>
              <xs:enumeration value="in emergency wait for police patrol" id="_7442"/>
              <xs:enumeration value="reduce your speed" id="_7443"/>
              <xs:enumeration value="observe speed limits" id="_7444"/>
              <xs:enumeration value="check point" id="_7445"/>
              <xs:enumeration value="entry requirements" id="_7446"/>
              <xs:enumeration value="insurance requirements" id="_7447"/>
              <xs:enumeration value="firearms requirements" id="_7448"/>
              <xs:enumeration value="pet requirements" id="_7449"/>
              <xs:enumeration value="shoulder travel no longer allowed" id="_7547"/>
          </xs:restriction>
      </xs:simpleType >
      <xs:simpleType>
          <xs:restriction base="xs:string">
              <xs:pattern value="\[.+\].*"/>
          </xs:restriction>
      </xs:simpleType>
      <xs:simpleType>
          <xs:restriction base="local:AdviceInstructionsMandatory" />
      </xs:simpleType>
    </xs:union>
</xs:simpleType>

<!-- Descriptive Name: DE_Instructions-Recommendations -->
<xs:simpleType name="AdviceInstructionsRecommendations" >
    <xs:union>
      <xs:simpleType>
          <xs:restriction base="xs:unsignedInt">
```

```
                    <xs:minInclusive value="7168"/>
                    <xs:maxInclusive value="7423"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="drive carefully" id="_7169"/>
                    <xs:enumeration value="drive with extreme caution" id="_7170"/>
                    <xs:enumeration value="approach with care" id="_7171"/>
                    <xs:enumeration value="keep your distance" id="_7172"/>
                    <xs:enumeration value="increase normal following distance" id="_7173"/>
                    <xs:enumeration value="test your brakes" id="_7174"/>
                    <xs:enumeration value="cross intersection with care" id="_7175"/>
                    <xs:enumeration value="pass with care" id="_7176"/>
                    <xs:enumeration value="use low beam headlights" id="_7177"/>
                    <xs:enumeration value="use fog lights" id="_7178"/>
                    <xs:enumeration value="use hazard warning lights" id="_7179"/>
                    <xs:enumeration value="do not leave your vehicle" id="_7180"/>
                    <xs:enumeration value="leave your vehicle and proceed to next safe place" id="_7181"/>
                    <xs:enumeration value="turn off engine" id="_7182"/>
                    <xs:enumeration value="close all windows turn off heater air conditioner and vents"
id="_7183"/>
                    <xs:enumeration value="turn off air conditioner to prevent engine overheating"
id="_7184"/>
                    <xs:enumeration value="turn off mobile phones and two way radios" id="_7185"/>
                    <xs:enumeration value="prepare to stop" id="_7186"/>
                    <xs:enumeration value="stop at next rest area" id="_7187"/>
                    <xs:enumeration value="stop at next safe place" id="_7188"/>
                    <xs:enumeration value="only travel if absolutely necessary" id="_7189"/>
                    <xs:enumeration value="drive to another service area" id="_7190"/>
                    <xs:enumeration value="use through traffic lanes" id="_7191"/>
                    <xs:enumeration value="use local traffic lanes" id="_7192"/>
                    <xs:enumeration value="use left hand parallel roadway" id="_7193"/>
                    <xs:enumeration value="use right hand parallel roadway" id="_7194"/>
                    <xs:enumeration value="use heavy vehicle lane" id="_7195"/>
                    <xs:enumeration value="observe recommended speed" id="_7196"/>
                </xs:restriction>
            </xs:simpleType >
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:pattern value="\[.+\].*"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="local:AdviceInstructionsRecommendations" />
            </xs:simpleType>
        </xs:union>
</xs:simpleType>

<!-- Descriptive Name: DE Alternate-Route -->
<xs:simpleType name="AlternateRoute" >
        <xs:union>
            <xs:simpleType>
                <xs:restriction base="xs:unsignedInt">
                    <xs:minInclusive value="8448"/>
                    <xs:maxInclusive value="8703"/>
                </xs:restriction>
            </xs:simpleType>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="detour where possible" id="_8449"/>
                    <xs:enumeration value="no detour available" id="_8450"/>
                    <xs:enumeration value="follow signs" id="_8451"/>
                    <xs:enumeration value="follow detour signs" id="_8452"/>
                    <xs:enumeration value="follow special detour markers" id="_8453"/>
                    <xs:enumeration value="do not follow detour signs" id="_8454"/>
                    <xs:enumeration value="detour in operation" id="_8455"/>
                    <xs:enumeration value="follow local detour" id="_8456"/>
                    <xs:enumeration value="compulsory detour in operation" id="_8457"/>
                    <xs:enumeration value="no suitable detour available" id="_8458"/>
                    <xs:enumeration value="detour is no longer recommended" id="_8459"/>
                    <xs:enumeration value="local drivers are recommended to avoid the area" id="_8460"/>
```

```
                 <xs:enumeration value="trucks are recommended to avoid the area" id="_8461"/>
                 <xs:enumeration value="consider alternate route" id="_8462"/>
                 <xs:enumeration value="consider alternate parking" id="_8463"/>
                 <xs:enumeration value="consider alternate destination" id="_8464"/>
                 <xs:enumeration value="consider alternate area" id="_8465"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:AlternateRoute" />
        </xs:simpleType>
      </xs:union>
</xs:simpleType>

<!-- Descriptive Name: DE_Asset-Status -->
<xs:simpleType name="AssetStatus" >
      <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="10240"/>
                <xs:maxInclusive value="10495"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="unknown status" id="_10240"/>
                <xs:enumeration value="ready for use" id="_10241"/>
                <xs:enumeration value="working normally" id="_10242"/>
                <xs:enumeration value="working autonomously" id="_10243"/>
                <xs:enumeration value="working incorrectly" id="_10244"/>
                <xs:enumeration value="not working" id="_10245"/>
                <xs:enumeration value="normal maintenance" id="_10246"/>
                <xs:enumeration value="in route to use" id="_10247"/>
                <xs:enumeration value="returning from use" id="_10248"/>
                <xs:enumeration value="out of service" id="_10249"/>
                <xs:enumeration value="off duty" id="_10250"/>
                <xs:enumeration value="on patrol" id="_10251"/>
                <xs:enumeration value="on call" id="_10252"/>
                <xs:enumeration value="on break" id="_10253"/>
                <xs:enumeration value="mandatory time off" id="_10254"/>
                <xs:enumeration value="low on fuel" id="_10255"/>
                <xs:enumeration value="low on water" id="_10256"/>
                <xs:enumeration value="low charge" id="_10257"/>
                <xs:enumeration value="missing" id="_10258"/>
            </xs:restriction>
        </xs:simpleType >
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:pattern value="\[.+\].*"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="local:AssetStatus" />
        </xs:simpleType>
      </xs:union>
</xs:simpleType>

<!-- Descriptive Name: DE_Closures-Road-and-Lane -->
<xs:simpleType name="Closures" >
      <xs:union>
        <xs:simpleType>
            <xs:restriction base="xs:unsignedInt">
                <xs:minInclusive value="768"/>
                <xs:maxInclusive value="1023"/>
            </xs:restriction>
        </xs:simpleType>
        <xs:simpleType>
            <xs:restriction base="xs:string">
```