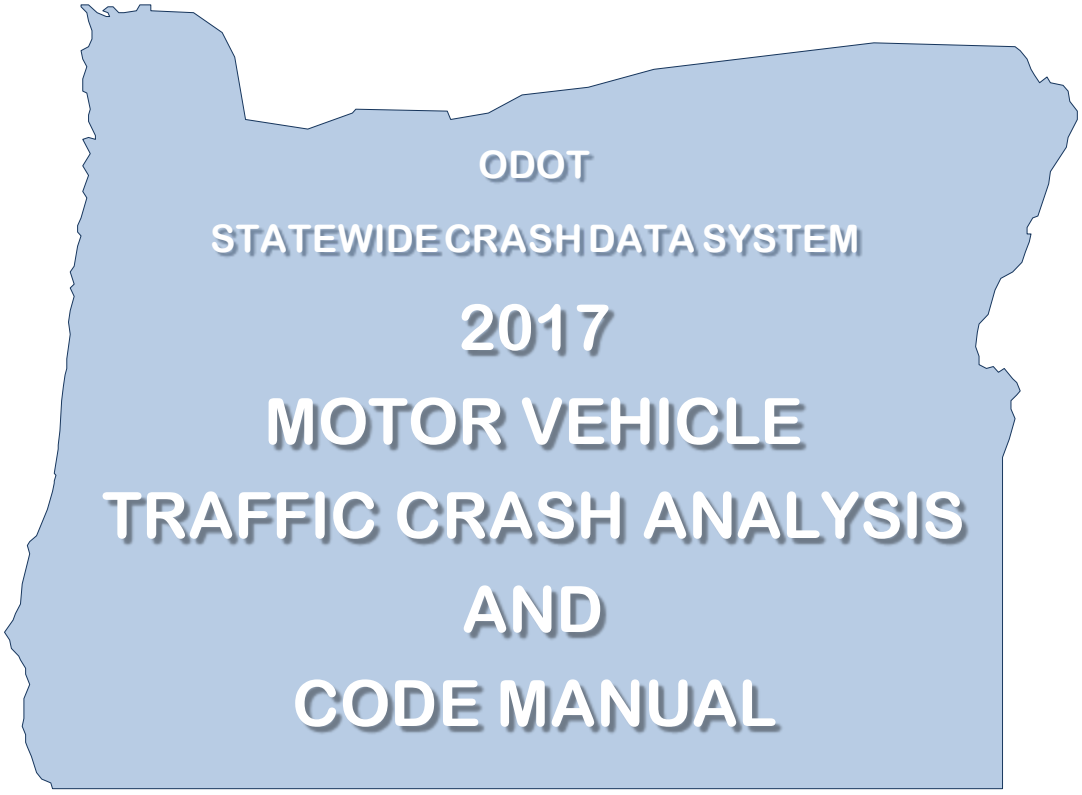

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Oregon Statewide Crash Data System
MOTOR VEHICLE
TRAFFIC CRASH ANALYSIS AND CODE MANUAL

Oregon Department of Transportation
Transportation Development Division
Crash Analysis and Reporting Unit
555 13th Street NE, Suite 2
Salem, OR 97301-4178

Robin Ness
Manager

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Graphics courtesy of ODOT Design
Photos courtesy of ODOT Photo and Video Services and Crash Analysis and Reporting Unit

The Crash Analysis and Reporting Unit compiles data for reported motor vehicle traffic crashes occurring on city streets, county roads and state highways. The data supports various local, county and state traffic safety programs, engineering and planning projects, legislative concepts, and law enforcement services.

Legally reportable motor vehicle traffic crashes are those involving death, bodily injury, damage to personal property in excess of $2,500; or damage to any vehicle over $2500 and any vehicle is towed from the scene as a result of damage (effective 1/1/2017). Drivers are required to file an Accident and Insurance Report Form with DMV within 72 hours of a traffic crash. From 1/1/2004 through 12/31/2016, drivers were required to file a report when damage to the driver's vehicle was over $1,500; damage to any vehicle was over $1,500 and any vehicle was towed from the scene as a result of damage; if injury or death resulted from the accident; or if damage to any one person's property other than a vehicle involved in the accident was over $1,500. From 9/1/1997 through 12/31/2003, the damage threshold was $1,000. Prior to 9/1/1997, the damage threshold was $500.

For more information on filing requirements, please contact Driver and Motor Vehicles Services (DMV).

Disclaimer: The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is, by statute, the responsibility of the individual driver, the Crash Analysis and Reporting Unit cannot guarantee that all qualifying crashes are represented in the Statewide Crash Data System, nor can assurances be made that all details pertaining to a single crash are accurate.

Database expansion and refinement implemented in 2002 may result in slight differences from data reported in earlier years.

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Introduction

This manual is an instructional tool for use in the analysis, coding, and decoding of motor vehicle crashes to the Oregon Department of Transportation's Statewide Crash Data System (CDS). The manual is organized according to the layout of data fields on the CDS Data Entry Application. It provides a list of codes, code descriptions, instructions, examples, and validation rules where applicable.

Section I – CRASH LEVEL records information that is common to a given crash, such as the hour the crash occurred, its location, collision type, crash classification, weather conditions, investigation, etc.

Section II – VEHICLE LEVEL records information specific to each vehicle involved in the crash, such as vehicle type, direction of travel, action, errors, causes, events, etc.

Section III – PARTICIPANT LEVEL records information specific to persons involved in the crash, such as participant type, sex, age, injury severity, etc. Participant records are created only for drivers, injured passengers, child passengers age 0 – 4 (whether injured or un-injured), and non-motorists who were struck. Records are *not* created for uninjured passengers or non-motorists (i.e. pedestrians, pedal-cyclists) who were involved but not struck.

Section IV – SYSTEM-GENERATED FIELDS identifies automated fields that were added to simplify querying and provide additional information for data reporting. Field values are auto-generated by based on other Crash, Vehicle or Participant field values entered by a Crash Data Technician.

Section V – APPENDIX presents a glossary of terms defined by ODOT and by the American National Standards Institute's Manual on Classification of Motor Vehicle Traffic Accidents (ANSI D-16.1-2007), such as legal intervention, aggressive driving vs. road rage.

Table of Figures has links for the **Graphics, Tables** and **Charts** represented in this manual.

Table of Handouts references the handouts received by a new Crash Data Technician.

Look for this symbol 

to identify which data is available in the ODOT Enterprise Data Warehouse (EDW).

Text in Blue similar to this "CRASH.URB_AREA_CD" in the top right corner of the descriptions describes the Crash Data System database table and field name for that data element. This *does not* correspond to the naming schema in the EDW.

The color highlighted titles of the various sections correspond to the Crash Unit's crash coding training document titled "Coding Workbook Manual" for cross-reference between the two documents.

Training Section 1	Training Section 4	Training Section 7
Training Section 2	Training Section 5	Training Section 8
Training Section 3	Training Section 6	Training Section 9

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Section I: CRASH LEVEL

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DMV Crash Serial Number

Data Format: 5 char CRASH.SER_NO

Code	Description
00001 – 79999	Actual "file" number assigned by DMV
8xxxx	8 leading: indicates original number assigned to incorrect county
9xxxx	9 leading: use when a duplicate serial number was assigned in the same county
99991 – 99999	Indicates fatal crash with no DMV number assigned

Instructions:

An Accident Number is assigned to each crash by the Driver and Motor Vehicle Services (DMV) division. For the purposes of crash coding this number is referred to as a **"Crash Serial Number"**. The number is stamped on the accident report cover sheet of the case file. Serial Number, together with the **County** code, makes up the unique case identifier for each crash. Crashes within each county are numbered consecutively each year.

For example, the DMV file number "03-1234" is made up of two parts: **"03"** represents the county code (in this case, Clackamas County), and **"1234"** is the Serial Number. The CDS data entry field is 5 characters long, so we add a leading zero and enter the number as **"01234"** in the data entry screen.

DMV does not include the "county code" with the serial number on **Multnomah County** reports. Refer to the accident report cover sheet to find the name of the county in which the crash occurred.

Crashes Assigned to the Wrong County

Occasionally, DMV assigns the crash to the wrong county. When this happens, Crash Data Technicians retain the incorrect serial number but enters an **"8"** as the first character in the 5-digit field. For example, a crash given number **"1234"** and assigned to Clackamas County in error would be coded to its correct county (i.e. Multnomah) but the Serial Number would be entered as "**81234"**. When this occurs within counties using larger serial numbers, "11234" would become "81234".

This practice allows the crash to be coded to the correct county in the Crash Data System, while flagging it as being originally assigned to an incorrect county in DMV's files. A **"green"** feedback form (*See Coder's Workbook*) is sent back to DMV indicating the error in the county assignment, and a record of the change is entered into the CAR unit's report tracking database. When DMV corrects the county assignment in their records, they send a new serial number back to us.

Prior to 2014, the Crash Data System was updated with the new serial number. Effective for 2014 coding, the revised serial number is retained in our database, and DMV's new number is entered to a spreadsheet for future reference.

DMV Crash Serial Number

(Continued)

Crashes Assigned Duplicate Serial Numbers

When DMV assigns a duplicate serial number (the same number for two different crashes in one county) the Crash Data Technician alters the serial number for the second crash by changing the first character to a **"9"**. For example, if DMV assigned number "1234" to two different crashes in County "03" (Clackamas County), we enter **"01234"** as the serial number for the first crash, and **"91234"** for the second crash.

The "9" should be assigned to the later crash date whenever possible. In the case of a larger serial number, "11234" would become "91234".
If an individual crash must be broken out into *more than* two different crashes, the Crash Data Technician should consult the code leader for recommendations on the use of an additional leading number.

Fatal Crashes with No DMV Assigned Number

DMV does not process all fatal crashes if they have no driver record to attribute the crash to. This would happen in cases of hit and run crashes that have no suspect or driver information available, but result in pedestrian or bicyclist fatalities. Another case would be when a vehicle goes into a body of water, there were no witnesses, and the car was recovered but the driver's body was not. DMV does not assume it is a fatality until a victim is recovered that confirms it as a fatality.

In these cases the code team leader will assign a number to the crash that will be unique for the county and year of crash. The assigned number in these cases is often **"99999"**.

Validations:

Rule #	Rule Message	Severity
1	*Serial Number is null (field required)*	*Red/Severe*
98	*Serial Number is not numeric*	*Red/Severe*
2001	*A crash already exists with this serial number, county and year value*	*Red/Severe*

Crash Date

CRASH.CRASH_MO_NO
CRASH.CRASH_DAY_NO
CRASH.CRASH_YR_NO

Data Format: 2 char, 2 char, 4 char

Code	Description	Code	Description	Code	Description
Month (MM)					
01	January	05	May	09	September
02	February	06	June	10	October
03	March	07	July	11	November
04	April	08	August	12	December
Day (DD)					
01-31	Actual Day				
Year (YYYY)*					
XXXX	Code Year				

Instructions:

Crash Date is an eight-digit field that describes the date on which the crash occurred, as recorded on the police accident report (PAR) or on the driver report. The format of the crash date field is **MMDDYYYY**, where MM equals the two-digit month, DD equals the two-digit day, and YYYY equals the four-digit century and year.

The year is automatically inserted by the electronic data entry system, but *may* be modified by the Crash Data Technician.

When the exact day of the crash is unknown and there is a missing persons report mentioned in the report, code the date the person went missing. If no missing persons report is mentioned, use the date of the police report.

Validations:

Rule #	Rule Message	Severity
4	*Crash Month, Day or Year is null*	*Red/Severe*
7	*Combination of month, day and year do not represent a valid date*	*Red/Severe*
8	*Year value must be at least 1985*	*Red/Severe*
9	*Future date value invalid*	*Red/Severe*
Varies	*[Code field value] was not found in [lookup table name] or is not valid as of the crash date*	*Red/Severe*

Crash Hour

Data Format: 2 char CRASH.CRASH_HR_NO

Code	Description	Code	Description
00	12:00 a.m. (midnight) - 12:59 a.m.	13	1:00 p.m. to 1:59 p.m.
01	1:00 a.m. to 1:59 a.m.	14	2:00 p.m. to 2:59 p.m.
02	2:00 a.m. to 2:59 a.m.	15	3:00 p.m. to 3:59 p.m.
03	3:00 a.m. to 3:59 a.m.	16	4:00 p.m. to 4:59 p.m.
04	4:00 a.m. to 4:59 a.m.	17	5:00 p.m. to 5:59 p.m.
05	5:00 a.m. to 5:59 a.m.	18	6:00 p.m. to 6:59 p.m.
06	6:00 a.m. to 6:59 a.m.	19	7:00 p.m. to 7:59 p.m.
07	7:00 a.m. to 7:59 a.m.	20	8:00 p.m. to 8:59 p.m.
08	8:00 a.m. to 8:59 a.m.	21	9:00 p.m. to 9:59 p.m.
09	9:00 a.m. to 9:59 a.m.	22	10:00 p.m. to 10:59 p.m.
10	10:00 a.m. to 10:59 a.m.	23	11:00 p.m. to 11:59 p.m.
11	11:00 a.m. to 11:59 a.m.	24	DO NOT USE
12	12:00 p.m. (noon) to 12:59 p.m.	99	Unknown Time

Instructions:

Crash Hour is a two-digit code representing the hour in which the crash occurred based on military time. *No rounding* of time is used.

If a crash occurs at 11:01 a.m. and another at 11:57 a.m., they are both coded as Crash Hour = 11.

Crashes that occur at 2400 hours are coded to the following day and code "**00**" should be used for "Crash Hour" in those situations.

To convert from "normal" time to military time, add "12" to the hour for crashes that occur between 1:00 pm and 11:59 pm.

Validations:

Rule #	Rule Message	Severity
82	*Combination of Crash Hour, Light Condition and Crash Month not found on the cross-reference table*	*Red/Severe*
83	*Warning - please review combination of Crash Hour, Light Condition and Crash Month*	*Yellow/Warning*
99	*Crash Hour is null*	*Red/Severe*

County

Data Format: 2 char CRASH.CRASH_CNTY_ID

Code	Description	Code	Description	Code	Description
01	Baker	13	Harney	25	Morrow
02	Benton	14	Hood River	26	Multnomah
03	Clackamas	15	Jackson	27	Polk
04	Clatsop	16	Jefferson	28	Sherman
05	Columbia	17	Josephine	29	Tillamook
06	Coos	18	Klamath	30	Umatilla
07	Crook	19	Lake	31	Union
08	Curry	20	Lane	32	Wallowa
09	Deschutes	21	Lincoln	33	Wasco
10	Douglas	22	Linn	34	Washington
11	Gilliam	23	Malheur	35	Wheeler
12	Grant	24	Marion	36	Yamhill

Instructions:

County code is a two-digit code that identifies the county in which the crash occurred. The County code, together with the DMV "File" Number (i.e. the Serial Number) makes up the unique case identifier for each crash.

Validations:

Rule #	Rule Message	Severity
10	*County value is null (field required)*	*Red/Severe*
13	*Combination of County, City Section and Urban Area not found on the cross-reference table*	*Red/Severe*
24	*County value entered doesn't match County value for this highway / milepoint for this year*	*Yellow/Warning*
2001	*A crash already exists with this serial number, county and year value*	*Red/Severe*

City

Data Format: 3 numeric

CRASH.CITY_SECT_ID

Code	Description	Code	Description	Code	Description	Code	Description
Blank	Outside City	041	Cornelius	081	Grass Valley	121	Lonerock
001	Adair Village	042	Corvallis	082	Greenhorn	122	Long Creek
002	Adams	043	Cottage Grove	083	Gresham	123	Lostine
003	Adrian	044	Cove	084	Haines	124	Lowell
004	Albany	045	Creswell	085	Halfway	125	Lyons
005	Amity	046	Cul	086	Halsey	127	Madras
006	Antelope	047	Dallas	087	Happy Valley	128	Malin
007	Arlington	251	Damascus	088	Harrisburg	129	Manzanita
008	Ashland	048	Dayton	089	Helix	130	Maupin
009	Astoria	049	Dayville	090	Heppner	131	Maywood Park
010	Athena	050	Depoe Bay	091	Hermiston	126	McMinnville
011	Aumsville	051	Detroit	092	Hillsboro	132	Medford
012	Aurora	052	Donald	093	Hines	133	Merrill
013	Baker City	053	Drain	094	Hood River	134	Metolius
014	Bandon	054	Dufur	095	Hubbard	135	Mill City
015	Banks	055	Dundee	096	Huntington	136	Millersburg
016	Barlow	056	Dunes City	097	Idanha	137	Milton-Freewater
017	Bay City	057	Durham	098	Imbler	138	Milwaukie
018	Beaverton	058	Eagle Point	099	Independence	139	Mitchell
019	Bend	059	Echo	100	Ione	140	Molalla
020	Boardman	060	Elgin	101	Irrigon	141	Monmouth
021	Bonanza	061	Elkton	102	Island City	142	Monroe
022	Brookings	062	Enterprise	103	Jacksonville	143	Monument
023	Brownsville	063	Estacada	104	Jefferson	144	Moro
024	Burns	064	Eugene	105	John Day	145	Mosier
025	Butte Falls	065	Fairview	106	Johnson City	146	Mt. Angel
026	Canby	066	Falls City	107	Jordan Valley	147	Mt. Vernon
027	Cannon Beach	067	Florence	108	Joseph	148	Myrtle Creek
028	Canyon City	068	Forest Grove	109	Junction City	149	Myrtle Point
029	Canyonville	069	Fossil	110	Keizer	150	Nehalem
030	Carlton	070	Garibaldi	111	King City	151	Newberg
031	Cascade Locks	071	Gaston	112	Klamath Falls	152	Newport
032	Cave Junction	072	Gates	113	Lafayette	153	North Bend
033	Central Point	073	Gearhart	114	La Grande	154	North Plains
034	Chiloquin	074	Gervais	115	Lake Oswego	155	North Powder
035	Clatskanie	075	Gladstone	116	Lakeside	156	Nyssa
036	Coburg	076	Glendale	117	Lakeview	157	Oakland
037	Columbia City	077	Gold Beach	252	La Pine	158	Oakridge
038	Condon	078	Gold Hill	118	Lebanon	159	Ontario
039	Coos Bay	079	Granite	119	Lexington	160	Oregon City
040	Coquille	080	Grants Pass	120	Lincoln City	161	Paisley

City

(Continued)

Code	Description	Code	Description	Code	Description	Code	Description
162	Pendleton	185	Sandy	207	Sweet Home	229	Westfir
163	Philomath	186	Scappoose	208	Talent	230	West Linn
164	Phoenix	187	Scio	209	Tangent	231	Weston
165	Pilot Rock	188	Scotts Mills	210	The Dalles	232	Wheeler
167	Port Orford	189	Seaside	211	Tigard	233	Willamina
168	Powers	190	Seneca	212	Tillamook	234	Wilsonville
169	Prairie City	191	Shady Cove	213	Toledo	235	Winston
170	Prescott	192	Shaniko	214	Troutdale	236	Woodburn
171	Prineville	193	Sheridan	215	Tualatin	237	Wood Village
172	Rainier	194	Sherwood	216	Turner	238	Yachats
173	Redmond	195	Siletz	217	Ukiah	239	Yamhill
174	Reedsport	196	Silverton	218	Umatilla	240	Yoncalla
175	Richland	197	Sisters	219	Union	241	Portland *(Unkown)*
176	Riddle	198	Sodaville	220	Unity	242	Portland N
177	Rivergrove	199	Spray	221	Vale	243	Portland NE
178	Rockaway Beach	200	Springfield	222	Veneta	244	Portland E.
179	Rogue River	201	Stanfield	223	Vernonia	245	Portland SE
180	Roseburg	202	Stayton	224	Waldport	247	Portland SW
181	Rufus	203	Sublimity	225	Wallowa	248	Portland W.
182	St. Helens	204	Summerville	226	Warrenton	249	Portland NW
183	St. Paul	205	Sumpter	227	Wasco	250	Portland Bridges
184	Salem	206	Sutherlin	228	Waterloo		

Instructions:

City is a three-digit code assigned to each incorporated city. An incorporated city is one that has been approved by an election, held in accordance with Statute (ORS Chapter 221). One code is assigned to each city, regardless of county boundary lines, except for the City of Portland.

The City field is coded when the crash occurs inside the city limits of an incorporated city. Not all named locales are incorporated cities. They are considered *unincorporated* communities so no city codes are assigned to them so code them as "outside city limits". Examples of unincorporated communities are Aloha, Clackamas, and Cedar Hills which fall within the Portland Urban Boundary.

Leave this field blank for crashes that occur outside city limits.

City of Portland

The CAR Unit uses nine different city codes to designate the geographic areas of Portland. This practice helps to identify crash locations when trying to distinguish between similarly named intersections such as:

"*SW* 6th & Morrison" and "*SE* 6th & Morrison"

City

(Continued)

The geographical boundaries in Portland are:

- The Willamette River, which separates East Portland from West Portland
- N Williams Avenue, which separates N from NE
- E Burnside Street, which separates NE from SE
- W Burnside Street, which separates NW from SW

A crash that occurs on, or is attributed to **Williams Avenue**, is coded to **"Portland N"**, code "**242"**.

Use code **"244"** for crashes on **East Burnside**, and code **"248"** for crashes on **West Burnside**.

Use code **"250"** only for crashes that occur on a bridge that crosses over the **Willamette River** in Portland.

If a crash occurs on a roadway that is located in multiple geographic areas of Portland and not enough information is provided in the report to distinguish which area, use code **"241"**, **"Portland - Unknown Section".**

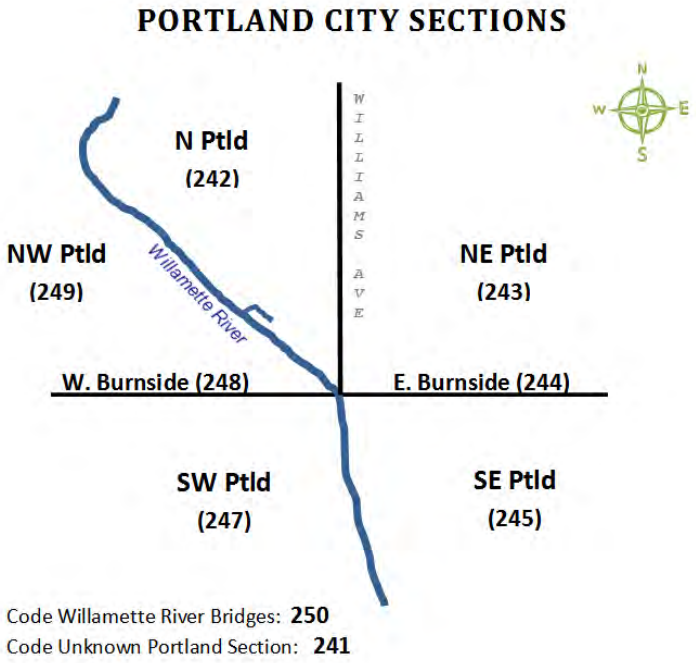


Figure 1: Portland City Sections

Validations:

Rule #	Rule Message	Severity
12	*City Value is null*	*Red/Severe*
13	*Combination of County, City Section and Urban Area not found on the cross-reference table*	*Red/Severe*
101	*City value entered doesn't match City value for this highway / milepoint for this year in TransInfo*	*Yellow/Warning*
143	*When entered, City must be > 0*	*Red/Severe*

Urban Area

Data Format: 2 numeric CRASH.URB_AREA_CD

Code	Description	Code	Description	Code	Description
Blank	Outside Area	35	Klamath Falls UA	59	Prineville UA
01	Albany UA	36	Junction City UA	61	Rainier UA
05	Astoria UA	37	La Grande UA	63	Redmond UA
07	Baker City UA	~~38~~	~~La Pine UA~~ *(Terminated 2015)*	65	Roseburg UA
09	Bend UA	39	Lebanon UA	67	Salem-Keizer- UA
11	Brookings UA	41	Lincoln City UA	68	Sandy UA
13	Canby UA	42	Madras UA	69	Seaside UA
17	Coos Bay-North Bend UA	43	McMinnville UA	70	Sheridan UA
19	Corvallis UA	44	Medford UA	71	Silverton UA
21	Cottage Grove UA	45	Milton-Freewater UA	73	St. Helens UA
22	Creswell UA	46	Molalla UA	75	Stayton UA
23	Dallas UA	47	Monmouth-Independence UA	77	Sutherlin UA
25	Eugene-Springfield UA	48	Myrtle Creek UA	79	Sweet Home UA
27	Florence UA	49	Newberg UA	80	Tillamook UA
31	Grants Pass UA	51	Newport UA	81	The Dalles UA
~~32~~	~~Green UA~~ *(Terminated 2015)*	53	Ontario UA	82	Veneta UA
33	Hermiston UA	55	Pendleton UA	84	**Weiser UA (New 2016)**
34	Hood River UA	57	Portland UA	85	Woodburn UA

Instructions:

Urban Area is a two-digit code that indicates whether the crash occurred within a Federal Aid Urban Transportation Boundary (FAUB). When determining this boundary, the city limits, current census information and major transportation facilities are taken into consideration.

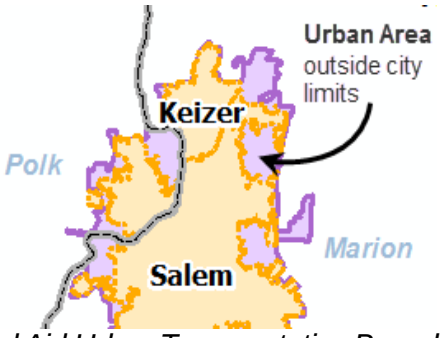


Figure 2: Federal Aid Urban Transportation Boundary (FAUB).

Leave this field blank for crashes that occur outside urban boundaries.

A large metropolitan urban area may encompass more than one city, and can cross county lines. The Portland Urban Area extends eastward from NW Portland to Troutdale, and southward to Marion County. Cities can lie partially inside and partially outside an urban boundary.
Refer to the Crash Locator Tool (CLT), the automated milepoint logs **(AMLs)**, or the "City – Urban Area" Cross-Reference Table for assistance in coding this field.

(Continued)

Figure 3: City/Urban Cross-Reference Table

City Code	City Name	UA Code	UA Name
001	Adair Village	19	CORVALLIS UA
004	Albany	01	ALBANY UA
008	Ashland	44	MEDFORD UA
009	Astoria	05	ASTORIA UA
012	Aurora	85	WOODBURN UA
013	Baker City	07	BAKER CITY UA
016	Barlow	13	CANBY UA
017	Bay City	80	TILLAMOOK UA
018	Beaverton	57	PORTLAND UA
019	Bend	09	BEND UA
022	Brookings	11	BROOKINGS UA
026	Canby	13	CANBY UA
033	Central Point	44	MEDFORD UA
037	Columbia City	73	ST HELENS UA
036	Coburg	25	EUGENEUA
039	Coos Bay	17	COOS BAY-NORTH BEND UA
041	Cornelius	57	PORTLAND UA
042	Corvallis	19	CORVALLIS UA
045	Creswell	22	CRESWELL UA
043	Cottage Grove	21	COTTAGE GROVE UA
047	Dallas	23	DALLAS UA
251	Damascus	27	PORTLAND UA
048	Dayton	43	McMINNVILLE UA
055	Dundee	49	NEWBERG UA
057	Durham	57	PORTLAND UA
058	Eagle Point	44	MEDFORD UA
064	Eugene	25	EUGENE UA
065	Fairview	57	PORTLAND UA
067	Florence	27	FLORENCE UA
068	Forest Grove	57	PORTLAND UA
073	Gearhart	69	SEASIDE UA
074	Gervais	85	WOODBURN UA
075	Gladstone	57	PORTLAND UA
078	Gold Hill	31	GRANTS PASS UA
080	Grants Pass	31	GRANTS PASS UA
083	Gresham	57	PORTLAND UA

Urban Area

(Continued)

City Code	City Name	UA Code	UA Name
087	Happy Valley	57	PORTLAND UA
091	Hermiston	33	HERMISTON UA
092	Hillsboro	57	PORTLAND UA
094	Hood River	34	HOOD RIVER UA
095	Hubbard	85	WOODBURN UA
099	Independence	47	MONMTH-INDPNDNCE UA
102	Island City	37	LA GRANDE UA
103	Jacksonville	44	MEDFORD UA
106	Johnson City	57	PORTLAND UA
109	Junction City	36	JUNCTION CITY UA
110	Keizer	67	SALEM UA
111	King City	57	PORTLAND UA
112	Klamath Falls	35	KLAMATH FALLS UA
114	La Grande	37	LA GRANDE UA
113	Lafayette	43	McMINNVILLE UA
115	Lake Oswego	57	PORTLAND UA
118	Lebanon	39	LEBANON UA
120	Lincoln City	41	LINCOLN CITY UA
127	Madras	42	MADRAS UA
131	Maywood Park	57	PORTLAND UA
126	McMinnville	43	McMINNVILLE UA
132	Medford	44	MEDFORD UA
134	Metolius	42	MADRAS UA
136	Millersburg	01	ALBANY UA
137	Milton-Freewater	45	MILTON-FREEWATER UA
138	Milwaukie	57	PORTLAND UA
140	Molalla	46	MOLALLA UA
141	Monmouth	47	MONMTH-INDPNDNCE UA
148	Myrtle Creek	48	TRI-CITY MYRTLE CREEK UA
151	Newberg	49	NEWBERG UA
152	Newport	51	NEWPORT UA
153	North Bend	17	COOS BAY-NORTH BEND UA
157	Oakland	77	SUTHERLIN UA
159	Ontario	53	ONTARIO UA
160	Oregon City	57	PORTLAND UA
162	Pendleton	55	PENDLETON UA
163	Philomath	19	CORVALLIS UA
164	Phoenix	44	MEDFORD UA

Urban Area

(Continued)

City Code	City Name	UA Code	UA Name
241-250	Portland	57	PORTLAND UA
171	Prineville	59	PRINEVILLE UA
172	Rainier	61	RAINIER UA
173	Redmond	63	REDMOND UA
176	Riddle	48	TRI-CITY MYRTLE CREEK UA
177	Rivergrove	57	PORTLAND UA
179	Rogue River	31	GRANTS PASS UA
180	Roseburg	65	ROSEBURG UA
182	St. Helens	73	ST HELENS UA
184	Salem	67	SALEM UA
185	Sandy	68	SANDY UA
186	Scappoose	73	ST HELENS UA
189	Seaside	69	SEASIDE UA
193	Sheridan	70	SHERIDAN UA
194	Sherwood	57	PORTLAND UA
196	Silverton	71	SILVERTON UA
198	Sodaville	39	LEBANON UA
201	Stanfield	33	HERMISTON UA
202	Stayton	75	STAYTON UA
203	Sublimity	75	STAYTON UA
206	Sutherlin	77	SUTHERLIN UA
207	Sweet Home	79	SWEET HOME UA
208	Talent	44	MEDFORD UA
209	Tangent	01	ALBANY UA
210	The Dalles	81	THE DALLES UA
211	Tigard	57	PORTLAND UA
212	Tillamook	80	TILLAMOOK UA
214	Troutdale	57	PORTLAND UA
215	Tualatin	57	PORTLAND UA
216	Turner	67	SALEM UA
218	Umatilla	33	HERMISTON UA
222	Veneta	83	VENETA UA
226	Warrenton	05	ASTORIA UA
228	Waterloo	39	LEBANON UA
230	West Linn	57	PORTLAND UA
233	Willamina	70	SHERIDAN UA
234	Wilsonville	57	PORTLAND UA
235	Winston	65	ROSEBURG UA
236	Woodburn	85	WOODBURN UA
237	Wood Village	57	PORTLAND UA

Urban Area

(Continued)

The following urban areas were added or terminated as of the 2005 code year.

- Brookings UA
- Hood River UA
- Madras UA
- Molalla UA
- Sandy UA
- Ashland UA was terminated. *(The City of Ashland now falls inside the Medford FAUB)*
- Wilsonville UA was terminated. *(The City of Wilsonville city now falls inside the Portland FAUB)*

New urban areas effective for the 2015 code year are:

- Creswell UA
- Junction City UA
- Myrtle Creek UA
- Sheridan UA
- Tillamook UA
- Veneta UA

New urban areas effective for the 2016 code year are:

- Weiser UA

Validations:

Rule #	Rule Message	Severity
13	*Combination of County, City Section and Urban Area not found on the cross-reference table*	*Red/Severe*
14	*Urban Area value was not found, or is not valid as of the crash date*	*Red/Severe*
15	*Combination of County and Urban Area is not valid in the cross-reference table*	*Red/Severe*
17	*Urban Area value entered doesn't match urban area value for this highway / milepoint for this year*	*Yellow/Warning*
95	*Urban Area value indicates urban area but Functional Class value indicates rural area*	*Red/Severe*
96	*Urban Area value indicates rural area but Functional Class value indicates urban area*	*Red/Severe*

Functional Classification

Data Format: 2 char CRASH.FC_CD

Code	Description	Code	Description
01	Rural Interstate	11	Urban Interstate
		12	Urban Other Freeways and Expressways
02	Other Rural Principal Arterial	14	Urban Other Principal Arterial
06	Rural Minor Arterial	16	Urban Minor Arterial
07	Rural Major Collector	17	Urban Major Collector
08	Rural Minor Collector	18	Urban Minor Collector
09	Rural Local	19	Urban Local

Instructions:

Functional Classification groups streets and roadways by similar characteristics of mobility and/or land access. Functional classifications are categorized based on federal standards. This classification technique recognizes that individual roads and streets are dependent upon each other.

Roads that occur inside a Federal Urban Area Transportation Boundary (FAUB) are considered "urban". All others are considered rural, even in areas with populations greater than 5,000.

It is extremely important to *determine the actual crash location, and assign the crash to a particular road*, before coding this and all other roadway elements.

Effective for 2014 coding, **grade-separated ramps** carry the **higher** of the functional classifications they connect to.

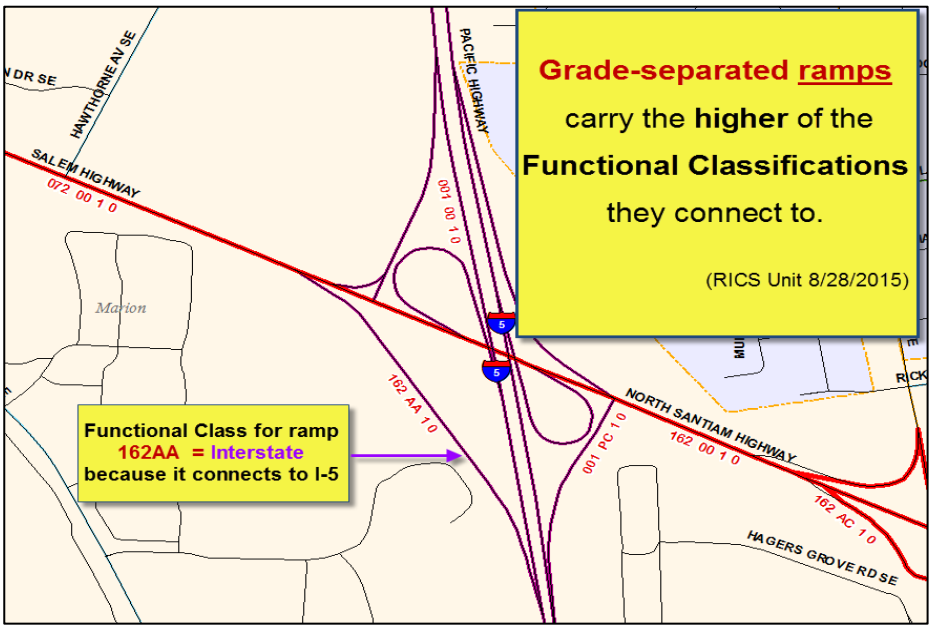


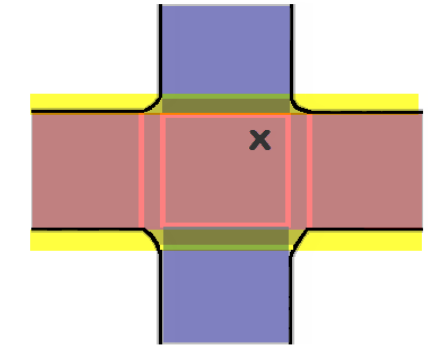
Figure 4: Grade Separated Ramps

(Continued)

Coding Functional Class for Intersectional Crashes

For crashes that occur **in the center** of an intersection (quadrants 1 – 4), **always** code the highest functional classification that exists at the intersection, *even if the vehicles are not traveling on the road that carries the highest functional class*.

For "intersectional crashes" that occur **outside the center** of the intersection (zones 5 and 6), **and for all non-intersectional crashes,** assign the crash to the roadway on which the first harmful event (impact) occurred, and code Functional Class accordingly.

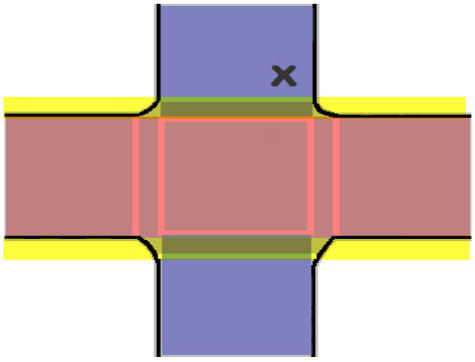


Intersectional Crash inside Center of Intersection

Code NHS as **'1'**
Code FC as **'02'**

NHS = yellow bar
Rural Principal Arterial (FC 02) = red
Rural Minor Arterial (FC 06) = blue

Figure 5: Intersectional "Inside"



Intersectional Crash outside Center of Intersection

Code NHS as **'0'**
Code FC as **'06'**

NHS = yellow bar
Rural Principal Arterial (FC 02) = red
Rural Minor Arterial (FC 06) = blue

Figure 6: Intersectional "Outside"

For crashes that occur inside the intersection of two state highways with equal classification, assign the crash to the highway that carries the highest priority (usually the highway with the lowest state highway index number). Refer to the "**Highway Intersectional Priority List**" under the instructions for the **Highway Number** field, to see which highways take priority at intersectional crashes.

Classifications:

Federal functional classifications define how roadways are intended to operate or function in moving traffic through the state

Arterials provide mobility, typically carrying high traffic volumes on a continuous network with no stub routes but provide very little direct land access. A stub route occurs when a roadway classification stops midway through the road. Arterials must connect from roadway to roadway.

Functional Classification

(Continued)

Collectors provide both mobility and land access gathering trips from localized areas and feed them onto the arterial network.

Locals provide land access. Local roads are lower traffic volume roadways that provide direct land access but are not designed to serve through traffic needs.

Urban Classifications:

Urban principal arterials (including interstates and other types of freeways) focus on mobility by serving trips through urban areas and long distance trips between traffic generators within an urban area.

Urban minor arterials focus on mobility but serve shorter trips between traffic generators within urban areas.

Urban collectors focus on mobility and land access by serving both intra-urban and local trips that take travelers to arterials.

Local Streets focus on land access rather than through trips and include all other public roads.

Rural Classifications:

Rural principal arterials (including rural interstates) focus on statewide and interstate mobility, and typically include the Interstate System and other rural freeways that serve longer distance high-volume corridors.

Rural minor arterials also focus on mobility but typically link smaller cities and towns and other statewide traffic generators, such as resorts that are not served by principal arterials.

Rural major collectors link county seats and communities not served by arterials but have an intra-county rather than statewide focus.

Rural minor collectors collect traffic from local roads and smaller communities.
Local roads focus on land access and relatively short trips and include all other public roads.

Validations:

Rule #	Rule Message	Severity
18	*Functional Class is null (field required)*	*Red/Severe*
19	*Functional Class not in lookup table or not valid as of crash date*	*Red/Severe*
20	*Functional Class value entered doesn't match functional class value for this highway / milepoint for this year ITIS*	*Red/Severe*
95	*Urban Area value indicates urban area but Functional Class value indicates rural area*	*Red/Severe*
96	*Urban Area value indicates rural area but Functional Class value indicates urban area*	*Red/Severe*

NHS

Data Format: 1 char CRASH.NHS_FLG

Code	Description
0	No
1	Yes

Instructions:

NHS indicates whether the highway on which the crash occurred is a part of the National Highway System. Prior to the federal surface transportation reauthorization "MAP-21", only certain state highways and intermodal connectors were included in the National Highway System. MAP-21 expanded the NHS to include many high-volume local roads. The CAR Unit began collecting the NHS value for those roads in the 2013 crash file.

NHS is depicted as a yellow border along the road linework in the CLT.

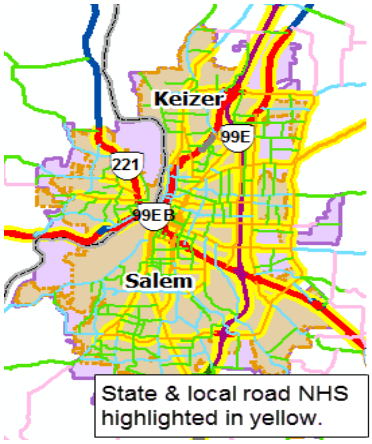


Figure 7: NHS Graphic

Code "0" is used for crashes that occur on portions of roadway that have **not** been designated as part of the National Highway System.

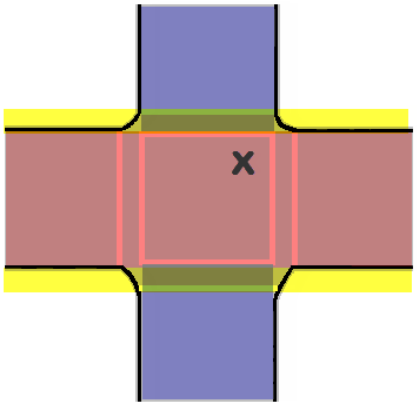
Code "1" is used for crashes that occur on portions of roadway that **have** been designated as part of the National Highway System.

Coding NHS for Intersectional Crashes

For crashes that occur **in the center** of the intersection (**quadrants 1 – 4**), code NHS according to the **highest functional classification** that exists **at the intersection**, *even if the vehicles are not traveling on the road that carries NHS*.

For intersectional crashes that occur **outside the center** of the intersection **(zones 5 and 6)**, code NHS based on the roadway on which the first harmful event (impact) occurred.

(Continued)

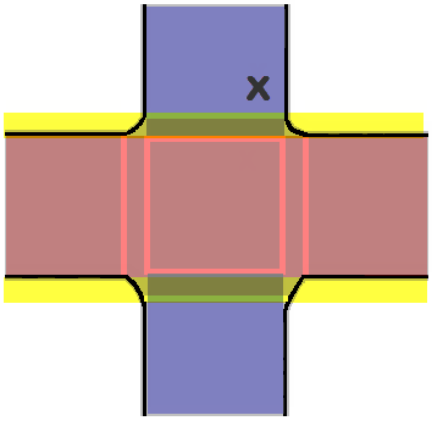


Intersectional Crash inside Center of Intersection

Code NHS as **'1'**
Code FC as **'02'**

NHS = yellow bar
Rural Principal Arterial (FC 02) = red
Rural Minor Arterial (FC 06) = blue

Figure 8: Intersectional "Inside"



Intersectional Crash outside Center of Intersection

Code NHS as **'0'**
Code FC as **'06'**

NHS = yellow bar
Rural Principal Arterial (FC 02) = red
Rural Minor Arterial (FC 06) = blue

Figure 9: Intersectional "Outside"

Validations:

Rule #	Rule Message	Severity
22	*NHS value entered doesn't match NHS value for this highway/milepoint for this year in ITIS*	*Yellow/Warning*

Highway Number

Data Format: 3 char

CRASH.HWY_NO

Code	Description	Code	Description	Code	Description
Blank	Not on Highway System	049	Lakeview-Burns	161	Woodburn-Estacada
001	Pacific	050	Klamath Falls-Malin	162	North Santiam
002	Columbia River	051	Wilsonville-Hubbard	163	Silver Creek Falls
003	Oswego	052	Heppner	164	Jefferson
004	The Dalles - California	053	Warm Springs	171	Clackamas
005	John Day	054	Umatilla-Stanfield	172	Eagle Creek-Sandy
006	Old Oregon Trail	058	Albany-Junction City	173	Timberline
007	Central Oregon	060	Rogue River	174	Clackamas-Boring
008	Oregon-Washington	061	Stadium Freeway	180	Eddyville-Blodgett
009	Oregon Coast	062	Florence-Eugene	181	Siletz
010	Wallowa Lake	063	Rogue Valley	189	Dallas-Rickreall
011	Enterprise-Lewiston	064	East Portland Freeway	191	Kings Valley
012	Baker-Copperfield	066	La Grande-Baker	193	Independence
014	Crooked River	067	Pendleton	194	Monmouth
015	McKenzie	068	Cascade Highway North	200	Territorial
016	Santiam	069	Belt Line	201	Alsea-Deadwood
017	McKenzie-Bend	070	McNary	210	Corvallis-Lebanon
018	Willamette	071	Whitney	211	Albany-Lyons
019	Fremont	072	Salem	212	Halsey-Sweet Home
020	Klamath Falls-Lakeview	**075**	**Sunrise Expressway**	215	Clear Lake-Belknap
021	Green Springs	081	Pacific Highway East	222	Springfield-Creswell
022	Crater Lake	091	Pacific Highway West	225	McVay
023	Dairy-Bonanza	092	Lower Columbia River	226	Goshen-Divide
025	Redwood	100	Historic Columbia River	227	Eugene-Springfield
026	Mt. Hood	102	Nehalem	228	Springfield
027	Alsea	103	Fishhawk Falls	229	Mapleton-Junction City
028	Pendleton-John Day	104	Fort Stevens	231	Elkton-Sutherlin
029	Tualatin Valley	105	Warrenton-Astoria	233	West Diamond Lake
030	Willamina-Salem	110	Mist-Clatskanie	234	Oakland-Shady
031	Albany-Corvallis	120	Swift	240	Cape Arago
032	Three Rivers	123	Northeast Portland	241	Coos River
033	Corvallis-Newport	130	Little Nestucca	242	Powers
035	Coos Bay-Roseburg	131	Netarts	244	Coquille-Bandon
036	Pendleton-Cold Springs	138	North Umpqua (eff.	250	Cape Blanco
037	Wilson River	140	Hillsboro-Silverton	251	Port Orford
038	Oregon Caves	141	Beaverton-Tualatin	255	Carpenterville
039	Salmon River	142	Farmington	260	Rogue River Loop
040	Beaverton-Hillsdale	143	Scholls	270	Lake of the Woods
041	Ochoco	144	Beaverton-Tigard	271	Sams Valley
042	Sherman	150	Salem-Dayton	272	Jacksonville
043	Monmouth-	151	Yamhill-Newberg	273	Siskiyou
044	Wapinitia	153	Bellevue-Hopewell	281	Hood River
045	Umpqua	154	Lafayette	282	Odell
046	Necanicum	155	Amity-Dayton	290	Sherars Bridge
047	Sunset	157	Willamina-Sheridan	291	Shaniko-Fossil
048	John Day-Burns	160	Cascade Highway South	292	Mosier-The Dalles

Highway Number

(Continued)

Code	Description	Code	Description	Code	Description
293	Antelope	370	O'Neil	451	Vale-West
300	Wasco-Heppner	372	Century Drive	453	Adrian-Arena Valley
301	Celilo-Wasco	380	Paulina	454	Adrian-Caldwell
320	Lexington-Echo	390	Service Creek-Mitchell	455	Olds Ferry-Ontario
321	Heppner-Spray	402	Kimberly-Long Creek	456	I.O.N.
330	Weston-Elgin	410	Sumpter	**457**	**Snake River Corr. Inst.**
331	Umatilla Mission	413	Halfway-Cornucopia	481	Baker-Copperfield Spur
332	Sunnyside-Umapine	414	Pine Creek	482	Redwood Spur
333	Hermiston	415	Dooley Mountain	483	McMinnville Spur
334	Athena-Holdman	420	Midland	484	Esplanade Spur
335	Havana-Helix	422	Chiloquin	485	Fort Stevens Spur
339	Freewater	424	South Klamath Falls	486	Gold Hill Spur
340	Medical Springs	426	Hatfield	487	Celilo-Wasco Spur
341	Ukiah-Hilgard	429	Crescent Lake	488	Chiloquin Spur
342	Cove	431	Warner	489	Parma Spur
350	Little Sheep Creek	440	Frenchglen	490	Homedale Spur
351	Joseph-Wallowa Lake	442	Steens	491	Weiser Spur
360	Madras-Prineville	449	Huntington	492	Payette Spur
361	Culver	450	Succor Creek	493	Ontario Spur

Instructions:

Highway Number represents the administrative number assigned to a state highway by ODOT. A **state highway** is:

> *"…a land-based public way designated by the Oregon Transportation Commission as a highway for the purpose of vehicular travel. The State of Oregon commonly has, but may not have, all right, title, interest, jurisdiction, maintenance and control of the entire area within the highway right-of-way."*

ODOT's Highway Number is not always the same as the signed ***Route Number*** which is physically posted along the highway. The Route Number is a political designation for certain travel routes. Highway numbers and route numbers may be assigned to the same segment of roadway.

The Highway Number is the same as the state highway index (inventory) number, with these three exceptions:

Highway Number	State Highway Index Number	Highway Name	Route Number
1E	081	Pacific Highway East	US 99E
1W	091	Pacific Highway West	US 99W
2W	092	Lower Columbia River Highway	US 30

Code this field only for crashes that occur on the state highway system. Leave this field blank for all other crashes.

Highway Number

(Continued)

Highway System Intersectional Crash Coding Priority

Use the following order of preference for coding crashes at the intersection of two or more highways**,** *when the collision occurs as vehicles are entering or exiting the intersection:*

1) **At the intersection of two or more highways**, code the highway with the smallest index number along with its corresponding milepoint. (The exceptions to this rule are listed below on the "Highway Intersectional Priority List")
2) **At the intersection of a mainline highway and a connection or frontage road**, code the mainline highway if it is being exited or entered (used)
3) **At the intersection of two connections**, code the connection that continues through the intersection
4) **At the intersection of a frontage road and a connection**, code the connection if it is being entered or exited (used)
5) **At the intersection of a city street and a highway**, code the highway if it is being entered or exited (used)
6) **At the intersection of a connection and a city street**, code the connection if it is being entered or exited (used)
7) **At the intersection of a frontage road and a city street**, code the frontage road if it is being entered or exited (used)
8) **At the intersection of a county road and any of the above highway component types**, follow the same rule

(Exceptions to the rule for ranking highways by number – revised 05/21/2007)

Figure 10: Highway Intersectional Priority List

Local Area	Less Important Hwy	Code More Important Hwy
Albany	16	58
Necanicum Junction	46	47
Parkrose	59	123
Pendleton	36	67
Philomath	27	33
SW Portland	3	26
Prineville	14	41
Progress	141	144
Progress	143	144
Sisters	15	16
Sylvan	29	47
Tillamook Junction	37	47
Vale	5	7
Valley Junction	32	39
Wallace Bridge	30	39
Warm Springs Junction	44	53

Highway Number

(Continued)

Validations:

Rule #	Rule Message	Severity
23	*Highway Number value entered must be in the Highway History lookup table where the entry is valid as of the crash date*	*Red/Severe*
43	*When Impact Location Code > 04 and Highway No. is null and City ID is not null and Number of turn Legs is null or 0, then Direction from Intersection must be < 9*	*Red/Severe*
63	*When Highway Number is entered, Impact Location Code must be a numeric value <=14*	*Red/Severe*
64	*When Highway Number is not entered but City Identifier is entered, Impact Location code must be a numeric value <=9*	*Red/Severe*
130	*Milepoint value not valid for the specified Highway in the specified Crash Year*	*Red/Severe*
136	*Either a Highway, Street or Recreational Road must be specified*	*Red/Severe*
173	*Intersecting Street must not be Unknown ('00000') if crash occurs on a highway outside city limits*	*Red/Severe*
1026	*Milepoint must be null when Highway Number is null and crash occurred inside city limits.*	*Red/Severe*

Roadway Number

Data Format: 1 char CRASH.RDWY_NO

Code	Description
Blank	Not on state highway system
1	Undivided highway; Add-mileage alignment of divided hwy (*except I-5 SBD "non-add" mileage)*
2	Non-add mileage alignment of a divided highway or couplet (*except I-5 NBD "add" mileage)*
5	Mileage on alignment not yet built or mileage on a non-state owned roadway and considered "located".

Instructions:

Roadway Number is a one-digit code used in conjunction with the Highway Number to make highway milepoints unique, and to specify the side of a divided highway on which the milepoint exists.

Code this field for crashes that occur on the state highway system only, including connections and frontage roads. Leave this field blank for all other crashes.

Code "1" is used when a crash occurs on an undivided highway, or on the "**add**" (increasing) mileage side of a divided highway or couplet.

There is one exception: **Interstate 5** milepoints decrease to the south. Even though the southbound lanes represent "non-add" mileage, **I-5 Southbound is designated as Roadway 1**. The northbound "add" mileage side is designated as Roadway 2.

Code "2" is used when a crash occurs on:

- The "non-add" (decreasing) mileage side of a divided highway, or
- On the "non-add" (decreasing) mileage side of a couplet, or
- **On the non-add side of a frontage road**. *(Effective 2007)*

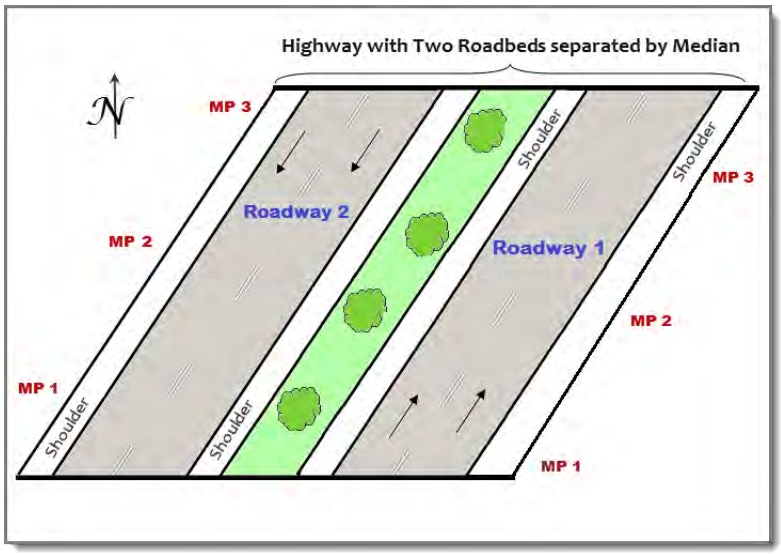


Figure 11: Example of Roadway Number when milepoints increase to the North

Roadway Number

(Continued)

Code "5" is used when a crash occurs on land areas that have a surveyed alignment where a road is **intended** to be built. No paved surface exists yet. This mileage is considered "located", and is **neither "add" nor "non-add**".

Add vs. Non-Add Mileage Definitions

Add-Mileage generally applies when milepoints have increasing values in the direction of travel. The term originated from the fact that the direction of increasing milepoints is used for mileage summarization, whereas separate roadways mileposted in the opposite direction are not counted in totals.

Alignment means the horizontal and vertical design of a section of roadway.

Couplet refers to the two *one-way* roadways of a divided highway, named differently, approximately parallel, with traffic flow in opposite directions, and separated by accessible land uses. *On the reverse "**non-add**" mileage side*, vehicular travel runs in the opposite direction from the side where the highway milepoints increase. The milepoints on this section of the highway still increase in the same direction as the rest of the highway, but the vehicle travels in the opposing direction.

> Oregon Route 99E, HIghway 72 in Salem, (Liberty Street NE and Commercial Street NE) is an example of a **couplet**. Liberty Street is the reverse side of the couplet, because Highway 72 milepoints increase southbound, though vehicular travel on Liberty Street is northbound.

Non-Add Mileage applies to milepoints that decrease in the direction of travel. Non-add mileage is not included in highway mileage summarization.

Roadway is the part of a trafficway designed, improved, and ordinarily used for vehicular travel. The boundary lines are the lateral limits of the traffic lanes. Parking lanes and shoulders are not part of the roadway. A parking lane ceases to exist and is considered a traffic lane when parking along a street is prohibited.

Validations:

Rule #	Rule Message	Severity
25	*Roadway Number value entered must be in the Roadway lookup table where the entry is valid*	*Red/Severe*
26	*Roadway Number must be null when the Highway Number is null*	*Red/Severe*
102	*Roadway Number is required when Highway Number is entered*	*Red/Severe*

Highway Component

Data Format: 1 char CRASH.HWY_COMPNT_CD

Code	Description
Blank	Not on state highway system
0	Mainline state highway
1	Couplet; code for **both** "add" and "non-add" sides of the highway
3	Frontage road
6	Connection

Instructions:

Highway Component is a one-digit code that describes the type of service the coded section of highway provides.

Code this field only for crashes that occur on the state highway system. Leave this field blank for all other crashes.

Code "0" is used when the crash occurs on the **mainline** *non-couplet* segments of highway. This refers to all roadways for a highway, excluding connections and frontage roads. *(This is a slight variation to the way mainline is defined by ODOT terms and definitions, for the purposes of coding for the CAR Unit).*

Code "1" is used when the crash occurs on mainline highway segments that create a **couplet**, both add-mileage and non-add mileage roadways. The Highway Performance Monitoring System (HPMS) defines couplets as "composed of the two roadways of a divided highway; often named differently; approximately parallel with traffic flow in opposite directions; and separated by accessible land uses".

For non-intersectional crashes on couplets, limit the **Number of Lanes** to *the "add" **or** "non-add" roadway on which the crash occurred.* Do not add the number of lanes for both couplet roadways.

Examples of Couplets include the:

- Marion Street and Center Street Bridges in Salem (Willamina-Salem Highway 30)
- Ferry Street SE and Trade Street SE in Salem (Salem Highway 72)
- Vista Ridge Tunnels in SW Portland. (Sunset Hwy 47)

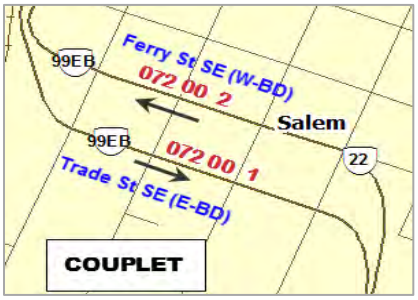


Figure 12: Couplet Diagram

(Continued)

Code "3" is used when the crash occurs on a **frontage road**. A frontage road is a road, secondary to and generally parallel to the mainline highway, providing service to abutting property and adjacent areas for control of access. A frontage road may or may not be connected to the highway it services.

Examples of Frontage Roads include the:

- Enchanted Way S.E. just south of Salem on the east side of I-5 (Pacific Hwy 1)
- Sunnyside Road on the opposite side of I-5

Code "6" is used when the crash occurs on a **connection**. A connection is a street or road, open to vehicular travel, (often an off or on ramp) which joins a road from the state highway system to any other road, entity, or to another state-owned road. A connection is usually much shorter than a spur or frontage road.

Code "8" is a placeholder and has not yet been approved for use.

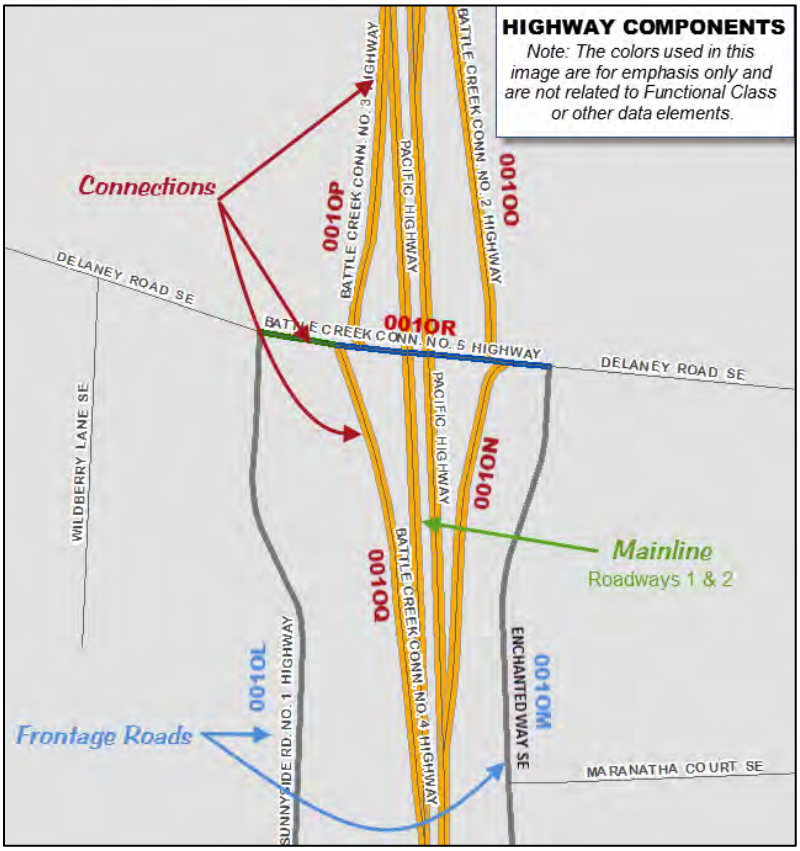


Figure 13: Highway Component Types

Highway Component

(Continued)

Validations:

Rule #	Rule Message	Severity
28	*Highway Component Code must be null when the Highway Number is null*	*Red/Severe*
33	*Highway Component must be 6 if a Road Connection value is specified*	*Red/Severe*
103	*Highway Component is required when Highway Number is entered*	*Red/Severe*
138	*When Highway Component = 6, the Connection Number must be entered, numeric, and must be > 0*	*Red/Severe*
146	*Highway Couplet begins or ends at this milepoint. Please confirm whether crash occurred on or off the couplet, and confirm Highway Component field value*	*Red/Severe*

Mileage Type

Data Format: 1 char CRASH.MLGE_TYPE_CD

Code	Description	
Blank	Not on State Highway System	
0	Regular Mileage	
T	Temporary Mileage	*(Terminated 2015)*
Y	Spur Mileage	*(Terminated 2010)*
Z	Overlapping	

Instructions:

Mileage Type is used to make milepoints unique in areas where there are multiple occurrences of the same milepoint on a single highway.

Leave this field blank for crashes that do not occur on the state highway system.

Code "0" is used for **Regular Mileage** – Regular mileage represents any mileage that does not fall within any of the categories listed below. The majority of the highway system is regular mileage.

Example 1

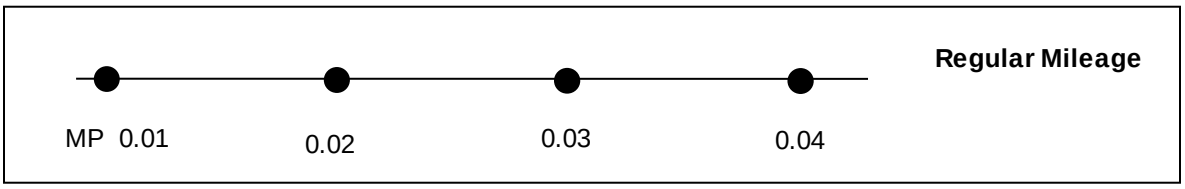


Figure 14: Original highway alignment (regular mileage)

Code "Z" is used for **Overlapping Mileage.** Overlapping (i.e. "Z") Mileage is comprised of duplicate milepoints used on a new length of roadway constructed within a segment of road that already has existing milepoints. This occurs when a highway is lengthened anywhere between its beginning and ending milepoints.

Example 2

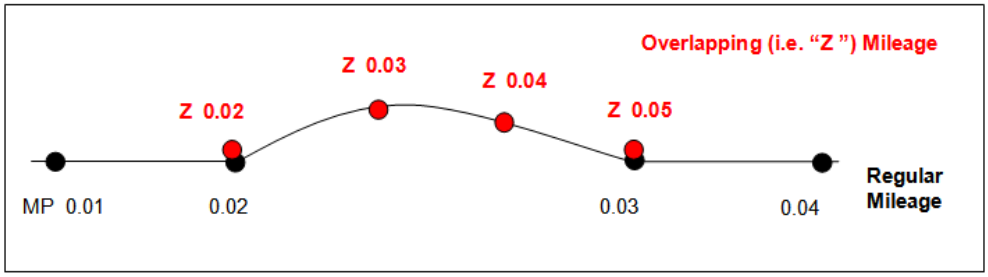


Figure 15: Regular mileage, with overlapping "Z" mileage inserted

Mileage Type

(Continued)

The TransInfo database assigns an "**Overlapping Mileage Code**" to every section of Z mileage that occurs on a highway. The Overlapping Mileage Code is a sequential number assigned, chronologically as reconstruction changes the original highway alignment. This field is not captured in the Crash Data System, except where the code exists as the 9th character of the LRS: i.e. **0001001Z2S00**.

In the TransInfo Highway Inventory and the AML, the first instance of "Z" mileage is assigned Overlapping Mileage Code "1".

Example 3

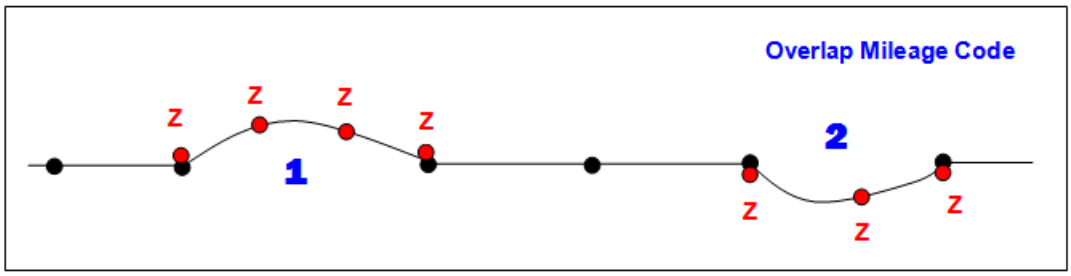


Figure 16: Overlapping Mileage Codes

Validations:

Rule #	Rule Message	Severity
30	*Mileage Type Code must be null when the Highway Number is null*	*Red/Severe*
31	*Mileage Type value entered doesn't match Mileage Type value for this highway / milepoint for this year in ITIS*	*Yellow/Warning*
104	*Mileage Type Code is required when Highway Number is entered*	*Red/Severe*

Connection Number

Data Format: 1 char CRASH.HWY_CMPNT_CD

Code	Description
Blank	Not a ramp or connection on state highway system
1-9	Actual ramp or connection number

Instructions:

Connection Number is a one-digit code that identifies an on-ramp, off-ramp, over-crossing or under-crossing roadway within an interchange. Connection numbers are assigned to each connection that belongs to a given highway within the interchange. Connection numbering re-starts at "1" for each additional highway; therefore, the same connection "numbers" may be assigned to a connection that belongs to a *different* highway *in the same interchange*.

Refer to the streets database, system setups, or diagrams to find the connection number for those that are set up inside city limits. For areas outside city limits, refer to the automated milepoint logs (AMLs) or CAR Unit diagrams.

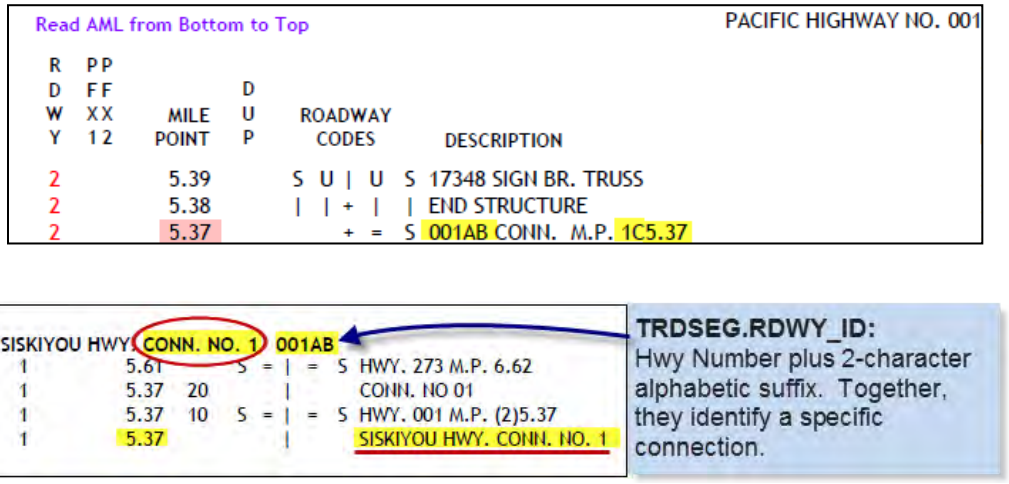


Figure 17: Examples from Automated Milepoint Log (AML)

Definition:

Connection: A street or road, open to vehicular travel (often an "on-ramp" and/or "off-ramp") which joins a road from the state highway system to any other road, entity, or another state owned road. A connection is usually much shorter than a spur or frontage road.

Validations:

Rule #	Rule Message	Severity
33	*Highway Component must be 6 if a Road Connection value is specified*	*Red/Severe*
138	*When Highway Component = 6, the Connection Number must be entered, numeric, and > 0*	*Red/Severe*

LRS

Data Format: 20 VarChar CRASH.LRS_VAL

LRS code string:

Zero	Hwy No.	Conn. ID (incl. FR)	Rdwy No.	Mileage Type Code	Overlap Code	Jurisdiction (S = State)	HPMS No. (always zeros)	**Sample LRS**
0	091	00	1	0	0	S	00	009100100S00
0	091	AB	1	0	0	S	00	0091AB100S00
0	091	00	1	Z	3	S	00	0091001Z3S00

Instructions:

The Linear Reference System (LRS) value is comprised of Trans-Info fields strung together, for specifying a highway segment. Linear reference systems provide a means of identifying the location of highway features by a relative measure (i.e. the milepoint). In GIS applications, the LRS is used with the milepoint to dynamically snap crashes to a point on a map, in lieu of using spatial coordinates.

Leave this field blank for crashes on non-state roads. At this time, only state highways are assigned LRS values in the Crash Data System.

The LRS is created by stringing together the values of seven different Trans-Info data elements, starting with a prefix of **"0"**. The LRS must be entered according to the chart below. There are 12 positions in the state highway LRS and each one must be filled in.

LRS Position	Trans-Info Field Name	Field Description	**Sample 1** Mainline	**Sample 2** Connection	**Sample 3** Z Mileage
1	Zero	Always enter a zero in the 1st position of the LRS	0	0	0
2 - 4	Highway Number	Enter the 3-digit highway number	091	091	091
5 – 6	Connection ID	Enter the 2-character alphabetic suffix used by the RICS unit to identify a connection or frontage road. Enter zeros for mainline highway.	00	AB	00
7	Roadway Number	Enter the roadway number (1 or 2)	1	1	1
8	Mileage Type Code	Enter the mileage type code (PFX 1 in the AMLs)	0	0	Z
9	Overlap Code	Enter the "overlap code" for Z mileage (PFX 2 in the AMLs, 1 - 9)	0	0	3
10	Jurisdiction	Enter S for State	S	S	S
11 – 12	HPMS No.	No longer used. Enter zeros	00	00	00

LRS

(Continued)

This field became effective as of the 2009 code year. LRS values were loaded retroactively for 2007 and 2008 crashes.

Validations:

Rule #	Rule Message	Severity
1023	*Length of LRS value is incorrect. Must be 12 characters*	*Red/Severe*

Latitude

CRASH.LAT_DEG_NO
CRASH.LAT_MINUTE_NO
CRASH.LAT_SEC_NO

Data Format: integer, integer, decimal

Code	Description
41 to 46	Latitude Degrees
0 to 59	Latitude Minutes
0.00 to 59.99	Latitude Seconds

Instructions:

Latitude and Longitude make up the spatial coordinates that specify the crash's geographical location on Earth. "Latitude" is the angular distance of a point on the earth, north or south of the equator. In CDS, latitude is entered as degrees, minutes, and seconds.

The Latitude value is usually imported from the Crash Locator Tool (CLT), but it can be entered into the Crash Data System manually.

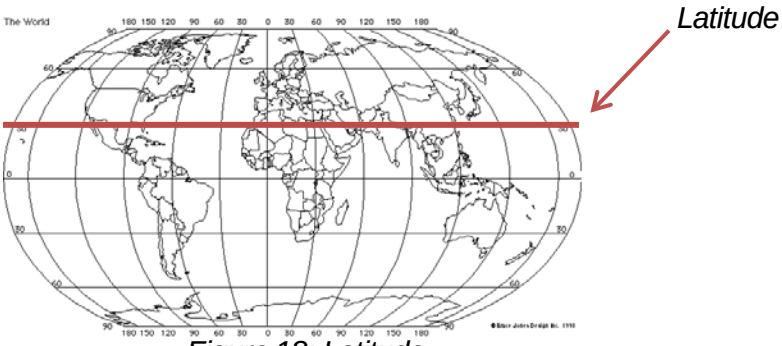


Figure 18: Latitude

The maximum value for **"seconds"** is **59.99**. *If the CLT imports a value of 60.00 in the "seconds" field, follow these steps to correct it*:

1) Increase the "minutes" value by 1
2) Change the "seconds" value to "0.00"

For example, if the CLT imports this Latitude: 45 33 60.00 change it to: 45 **34** 0.00

Available for 2007 and later years.

Validations:

Rule #	Rule Message	Severity
105	*When entered, Latitude Degrees must be a whole number between 41 and 47, inclusive*	*Red/Severe*
106	*When entered, Latitude Minutes must be a whole number between 0 and 59, inclusive*	*Red/Severe*
107	*When entered, Latitude Seconds must be a numeric value between 0.00 and 59.99, inclusive*	*Red/Severe*
125	*Latitude Minutes must be null when Latitude Degrees is null*	*Red/Severe*
126	*Latitude Seconds must be null when Latitude Degrees is null*	*Red/Severe*
164	*Latitude Minutes must be entered when Latitude Degrees is entered*	*Red/Severe*
165	*Latitude Seconds must be entered when Latitude Degrees is entered*	*Red/Severe*

Longitude

CRASH.LONGTD_DEG_NO
CRASH.LONGTD_MINUTE_NO
CRASH.LONGTD_SEC_NO

Data Format: integer, integer, decimal

Code	Description
-116 to -124	Longitude Degrees
0 to 59	Longitude Minutes
0.00 to 59.99	Longitude Seconds

Instructions:

"Longitude" is the angular distance of a point's meridian (an imaginary line between the earth's poles that crosses the equator at right angles), east or west of the prime meridian at Greenwich, England. In CDS, longitude is entered as degrees, minutes, and seconds. This Longitude value is usually imported from the CLT, but it can be entered into the Crash Data System manually.

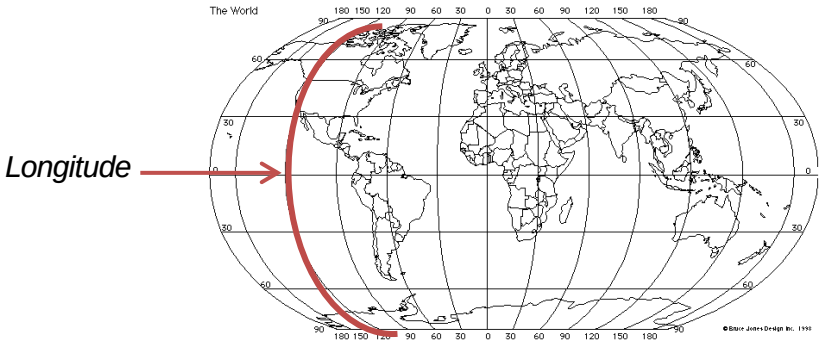


Figure 19: Longitude

The maximum value for **"seconds"** is 59.99. If the CLT imports a value of 60.00 in the "seconds" field, follow these steps to correct the Longitude:

1) Increase the "minutes" value by 1
2) Change the "seconds" value to "0.00"

For example, if the CLT imports this Longitude: -122 53 60.00, change it to: -122 **54** 0.00

Available for 2007 and later years.

Validations:

Rule #	Rule Message	Severity
108	*When entered, Longitude Degrees must be a whole number between 124 and 117, inclusive or between -124 and -117, inclusive*	*Red/Severe*
109	*When entered, Longitude Minutes must be a whole number between 0 and 59, inclusive*	*Red/Severe*
110	*When entered, Longitude Seconds must be a numeric value between 0.00 and 59.99, inclusive*	*Red/Severe*
127	*Longitude Minutes must be null when Longitude Degrees is null*	*Red/Severe*
128	*Longitude Seconds must be null when Longitude Degrees is null*	*Red/Severe*
166	*Longitude Minutes must be entered when Longitude Degrees is entered*	*Red/Severe*
167	*Longitude Seconds must be entered when Longitude Degrees is entered*	*Red/Severe*

Special Jurisdiction

(For crashes that occur on Recreational or Other Roads)

Data Format: 2 char CRASH.SPECL_JRSDCT_ID

Code	Description	Code	Description
Blank	No Special Jurisdiction (default)	59	Crater Lake National Park
40	Deschutes National Forest	60	Any BLM Road
41	Fremont National Forest	70	Any State Park Road
42	Malheur National Forest	71	Any State Forest Service Road
43	Mt. Hood National Forest	80	Burns Reservation
44	Ochoco National Forest	81	Fort McDermitt Reservation
45	Rogue River National Forest	82	Grand Ronde Reservation
46	Siskiyou National Forest	83	Siletz Reservation
47	Siuslaw National Forest	84	Umatilla Reservation
48	Umatilla National Forest	85	Warm Springs Reservation
49	Umpqua National Forest	97	Other Federal Jurisdiction
50	Wallowa-Whitman National Forest	98	Other Non-Federal Jurisdiction
51	Willamette National Forest	99	Unknown Jurisdiction
52	Winema National Forest		

Instructions:

Special Jurisdiction is used for crashes that occur on roads that are open to the public, but under the authority of an agency other than an incorporated city, county, or ODOT.

Examples of special jurisdictions are:

- National Forest Service
- National Park Service
- Bureau of Land Management (BLM)
- State Forest Service
- State Park Service
- Reservations – (Native American Tribal Lands)
- Miscellaneous non-county roads

Enter the Special Jurisdiction code that corresponds to the area in which the crash occurred.
When a value is entered in Special Jurisdiction, the data entry system enables the following fields:

- Jurisdiction Group (this code is automatically supplied by data entry system)
- Recreational / Other Road Number (modified Street Number field)
- Intersecting Recreational / Other Road Number (modified Nearest Intersecting Street Number field)

Special Jurisdiction is not used to code crashes that occur on State Highways, County Roads, or City Streets that run through a Special Jurisdiction. This field is only for roads that belong to the Special Jurisdiction.

Special Jurisdiction

(For crashes that occur on Recreational or Other Roads)

(Continued)

Coding Recreational and Other Roads

Location coding for Recreational and Other Roads follow the same rules as for Non-Milepointed county road coding (see instructions under Street Number, "Recreational / Other Road"). Some recreational roads have no official or available number, and can be difficult to locate on a map. Code the location as accurately as the information available in the crash report and references allow. Use the CLT to collect a coordinate value, or to set the unlocatable flag if necessary.

If the crash occurred in one of the following special jurisdictions, use the two-letter prefix listed below, at the start of the road value. This rule is appropriate for both fields: **"Recreational Road Number"** and **"Nearest Intersecting Recreational Road Number".**

- NF (National Forest); i.e. NF70
- BL (BLM); i.e. BL3-14-06
- NP (National Park); i.e. NP2401
- SF (State Forest); i.e. SF317
- SP (State Park); i.e. SP2401
- CR (miscellaneous non-county road)

*Do **not** insert leading zeros or spaces.*

If a milepoint is referred to on the report, enter it into the Milepoint field.

When a number is not available for a road, but a road name has been given, spell out the name as completely as possible within the 15 alphanumeric spaces allowed in the data entry program. Otherwise, use an abbreviated form of the road name. Consult with the code leader to determine what abbreviation should be used.

If the location cannot be found on a map, enter the road name described in the report, and code Functional Classification as a local road. Reference the crash from the closest road described in the crash reports.

Note: *Prior to the 2003 code year, recreational / other road crashes were entered into a separate database, called the Recreational Crash Program, which has been archived by the CAR Unit.*

Validations:

Jurisdiction Group

(For Special Jurisdictions)

Data Format: 2 char CRASH.SPECL_JRSDCT_ID

Code	Description
1	National Forest
2	State Forest
3	National Park
4	State Park
5	Bureau of Land Management
6	Reservation - (Native American Tribal Lands)
7	Other Federal Jurisdiction
8	Other Type Jurisdiction (non-federal land)
9	Unknown Jurisdiction

Instructions:

Jurisdiction Group identifies the category of "Special Jurisdiction" coded in the previous field. The code and description are automatically supplied by the CDS based on the value that was entered into the Special Jurisdiction field.

This field is only populated for crashes that occur on special jurisdiction roadways. For all other crashes, leave this field blank.

Validations:

Street Number (First Street)

CRASH.AGY_ST_NO
CRASH.RECRE_RD_NM

Data Format: 7 char/15 varchar

Code	Description
Blank	Crash occurred on a State highway outside city limits
xxxxxxx	Varies depending on the jurisdiction of the road being coded

Instructions:

The Street Number field length and coding instructions vary, depending on the local government and road jurisdiction for the crash, and if the crash location is **"intersectional"**. Street Number codes are found in the Set-up Books, the CDS Streets database, or County Road log books.

Code Street Number for all crashes, except those on state highways outside city limits.
Never enter "00000" in the Street Number field.

For **non-intersectional** crashes, the value entered in the Street Number field represents the road on which the crash occurred.

For **intersectional** crashes involving **city streets** or **non-milepointed county roads**, enter the **smallest** street number of the two roads being coded. This practice simplifies coding and avoids complex hierarchical rules.

These sections explain how to code Street Number for the stated jurisdiction.

1. City Streets and State Highways inside City Limits
    - Portland Bridges
    - Complicated Diagrams & Zones (Portland only; crashes coded prior to 2012)
    - Cul-de-sacs

2. State Highways
    - Inside city limits
    - Outside city limits

3. County Roads
    - Non-milepointed
    - Milepointed
    - Lane County

4. Recreational / Other Roads

City Streets and State Highways Inside City Limits

Street Number codes for roads inside cities are 5 characters in length, and include leading zeros when necessary.

Street Number (First Street)

(Continued)

Crashes in this jurisdiction require entries in both the "first" Street Number field and the "second" Street Number field (Nearest Intersecting Street Number).

For **intersectional** crashes inside city streets, enter the **smaller** of the two street numbers into the 1st Street Number field.

Street Number codes for city streets are available from the Non-System Set-up Books. Street Number codes for state highways inside city streets are available from the System Set-up Book. Use the codes provided for all fields represented in the Set-ups.

Portland Bridges that cross the Willamette River:

Code Willamette River bridges in the City of Portland according to the "Willamette River Bridge" supplement. There are 10 bridges included in this supplement.

- Enter "250" (Portland Bridges) into the City field
- Look up the street number code for the **bridge** and enter it into the "Street Number" field
- Follow the "Willamette River Bridge" supplement instructions for how to code the Nearest Intersecting Street Number for this bridge

~~Portland Complicated Diagrams & Zones~~: *(No longer in use)*

This practice was terminated as of the 2012 code year. Instructions are retained for decoding historic data.

The City of Portland provided zone diagrams to the CAR Unit for coding complicated intersections inside their city. These locations were assigned a "Diagram" number and were partitioned into separate "Zones". The "Diagram" number (which was the larger of the two numbers) was entered into the "Street Number" field. The "Zone" number was entered into the Nearest Intersecting Street Number field. Contact the City of Portland for historic diagrams.

Street Numbers for Multiple Cul-de-sacs with the Same Name:

Some jurisdictions, such as the City of Eugene, allow multiple cul-de-sacs to be built intersecting a main road, all named the same. These areas require a diagram that MUST be used when coding and decoding the streets. Crash Data Technicians will consult with the Code Leader for instructions on creating a diagram of the area to be set up.

The Crash Data Technicians will select a cross street at the southern or westernmost part of the area as a fixed reference point. Each cul-de-sac will be labeled Cul 1, Cul 2, Cul 3, etc. based on the number of cul-de-sacs present, with 1 being the first cul-de-sac to the North or East of the reference point. It is important to add a cultural reference to the diagram that will not change, to assist in the identification of new cul-de-sacs added after the initial set up of this area.

If additional cul-de-sacs are added between existing cul-de-sacs at a later time, label them with a decimal (i.e. 1.5 will fall between cul-de-sac 1 and 2, etc.). If a new cul-de-sac is added to the South or West of the original reference point, label them with negatives. Cul -1, Cul -2, Cul -3 etc.

Street Number (First Street)

(Continued)

Example1

Figure 20: Lawnridge Ave. in Springfield, Oregon.

Example 2

Figure 21: 6th Street in Springfield

State Highways Outside City Limits

For crashes on state highways **inside** city limits, follow the instructions for City Streets.

Leave the Street Number field blank for crashes that occur on state highways that are **outside** city limits.

County Roads

When both the **City** and **Highway Number** fields remain blank, the Crash Data Entry System recognizes that a County Road or Special Jurisdiction Road will be entered into the **Street Number** field. The data entry system automatically lengthens the **Street Number** field to **seven characters**. This enables us to code the full Public Road Inventory (PRI) number, which may be six characters long; and allows us to code an "**alphabetic tie-breaker**" in the 7th position, when two county roads are assigned the same PRI number by the County.

Enter leading zeros for numbers taken from the County Road Log books, to make the code at least 5 characters in length.

Street Number (First Street)

(Continued)

For crash coding purposes, the term "**county road**" refers to **a non-state road that is outside city limits**, In CDS; "county road" isn't designated by maintenance jurisdiction or urban boundary.

County road coding for the Street Number field depends on whether or not milepoints are coded for a given County.

"Non-milepointed" County Roads

We do not code milepoints for county roads in the following three counties:

- Deschutes
- Multnomah
- Washington

Code the Street Number field for non-milepointed county roads the same way as you do for city streets. Look up the road number in the Streets database or in the Non-System Set-up Book, and enter the number **exactly as shown**. If no number is available, submit a new intersection "set-up" involving the desired road.

For **intersectional** crashes on non-milepointed county roads, enter the **smaller** of the two street numbers into the 1st Street Number field.

"Milepointed" County Roads

For non-intersectional crashes on milepointed county roads, look up the road number in the Streets database, and enter the number **exactly as shown**. If no number is available, submit a request for a new intersection "set-up" involving the road, and propose an alphabetic abbreviation for the street number that is 6 characters or less.

For intersectional crashes on milepointed county roads, enter the lowest number of the two roads being used.

Lane County Roads

Lane county roads are coded uniquely, using all the fields listed below:

- Street Number
- Nearest Intersecting Street Number
- Distance from Intersection, coded using hundredths of a mile measurement
- Direction from Intersection, coded using cardinal direction codes 1, 3, 5 and 7
- Milepoint

For intersectional crashes on Lane county roads, enter the lowest of the two street numbers in the 1st Street Number field, and its corresponding milepoint in the Milepoint field.

Street Number (First Street)

(Continued)

Recreational and Other Roads

The Street Number field changes to “Recreational Road Name” when a value is entered into the “Special Jurisdiction” field. The field length for Recreational Road is expanded to 15 characters.

Refer to the “Special Jurisdiction” field for instructions on how to code Recreational Road Name and Intersecting Recreational Road Name.

Validations:

Rule #	Rule Message	Severity
36	*First street number must be less than the intersecting street number*	*Red/Severe*
136	*Either a Highway, Street or Recreational Road must be specified*	*Red/Severe*
149	*First Street must not be blank or 00000 for crashes that occur within city limits*	*Red/Severe*
151	*First Street must not be blank or 00000 for non-system crashes that occur outside city limits*	*Red/Severe*
154	*When entered, Street Number must be five digits (if City is not null)*	*Red/Severe*
163	*Combination of Street Number and Intersecting Street Number not found in cross reference table*	*Red/Severe*
168	*When entered, Street Number must be between five and seven digits inclusive for crashes occurring outside city limits*	*Red/Severe*

Nearest Intersectional Street Number ("Second Street")

CRASH.ISECT_AGY_ST_NO
CRASH.ISECT_RECRE_RD_NO

Data Format: 7 char/15 varchar

Code	Description
Blank	Crash occurred on a State Highway outside city limits, or on a milepointed County Road
00000	Street not found
xxxxxxx	Up to 7 characters, depending on the jurisdiction of the road being coded *(Can be up to 15 characters for Special Jurisdiction road)*

Instructions:

The "Nearest Intersecting Street" is the road closest to the road that was coded in the "Street Number" field, belonging to the same jurisdiction, and preferably on the same side of the road. This is always true when coding physically divided state highways such as Interstate 5. For roads that are not physically divided, it is permissible to enter the nearest intersecting street from the other side of the road. See the illustrations below for examples.

Example 1

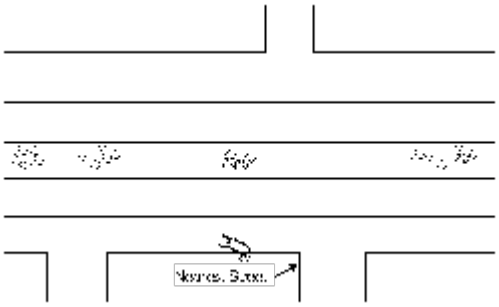


Figure 22: Divided Highway

Example 2

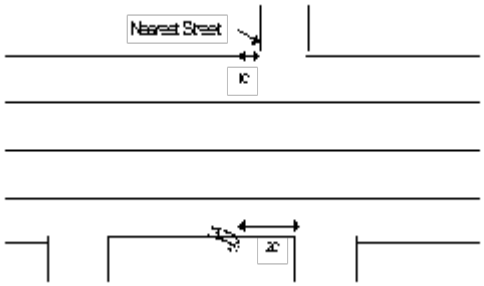


Figure 23: Undivided Highway

When no intersecting road exists within the same jurisdiction, it is permissible to code the nearest cross-street from a neighboring jurisdiction. Enter REF in the "Diag" field of the Intersection Set-up.

For **Intersectional** crashes, enter the **larger** of the two street codes in the 2nd Street Number field for crashes that occur on city streets, state highways **inside** city limits, non-milepointed county roads, and milepointed Lane County roads.

Leave this field blank when coding crashes that occurred:

- On state highways *outside* of city limits
- On **milepointed** county roads (other than Lane County)

City Streets (2nd Street Number)

Crashes that occur inside city limits require a code in both the 1st Street Number and the 2nd Street Number fields.

Nearest intersecting Street Number (Second Street)

(Continued)

For intersectional crashes within city limits (including intersections of a city street and a state highway), code the **larger** of the two street codes in the 2nd Street Number field.

Enter "00000" in this field when there is insufficient information available from the crash report for you to identify the nearest intersecting street. (Only use this code when absolutely necessary, because it limits the value of the data.)

State Highways (2nd Street Number)

When an **intersectional** crash occurs **inside city limits** and is coded to state highway jurisdiction, the rule for coding the **larger** street number in the **2nd Street Number** field still applies. If the state highway's street number is the larger number, enter it in the 2nd Street Number field.

Outside city limits, when a **non-milepointed county road** is coded in the 1st Street Number field, and the **2nd Street Number** coded is **a state highway**, frontage road, or connection, enter the following alphabetic characters in the first two positions of this field. Enter the State Highway Index Number in the next 3 positions of the field.

- OH – to represent a mainline highway, as in OH026
- OF – to represent a frontage road, as in OF026
- OC – to represent a ramp or connection, as in OC026

Leave the 2nd Street Number field blank for crashes that occur on state highways outside city limits.

Non-Milepointed County Roads (2nd Street Number)

For Deschutes, Multnomah, and Washington County roads, follow the same instructions as for City Streets.

Enter **"00000"** in this field when there is insufficient information available from the crash report for you to identify the nearest intersecting street. (Only use this code when absolutely necessary, because it limits the value of the data.)

Milepointed County Roads (2nd Street Number)

For milepointed county roads, we only code the 1st Street Number field. Therefore, leave this field blank. (Lane County has its own rules below.)

If no county road number is available from the Log Books, the crash is coded as if it occurred on a non-milepointed county road. See team lead for further instructions.

Nearest intersecting Street Number (Second Street)

(Continued)

Lane County

Although the 2nd Street Number field is not coded for "milepointed" county roads, Lane County is an exception.

For intersectional crashes on county roads, enter the ***larger*** of the two street codes in the 2nd Street Number field.

For non-intersectional crashes, enter the number for the nearest intersecting road. If the nearest road is a state highway, follow the rules in the State Highway section above.

Enter "00000" in this field when there is insufficient information available from the crash report for you to identify the nearest intersecting street. (Only use this code when absolutely necessary, because it limits the value of the data.)

Recreational and Other Roads

For crashes that occur in Special Jurisdictions, the Nearest Intersecting Street Number field changes to "Intersecting Recreational Road Name". The field length for Intersecting Recreational Road is expanded to 15 characters.

Refer to "Special Jurisdiction" for instructions on how to code Intersecting Recreational Road Name.

Validations:

Rule #	Rule Message	Severity
36	*First street number must be less than the intersecting street number*	*Red/Severe*
163	*Combination of Street Number and Intersecting Street Number not found in cross reference table*	*Red/Severe*
169	*When entered, Intersecting Street Number must be between five and seven digits inclusive for crashes occurring outside city limits*	*Red/Severe*
173	*Intersecting Street must not be Unknown ("00000") if crash occurs on a highway outside city limits*	*Red/Severe*
2003	*Intersecting Street must not be blank if the crash occurred inside city limits*	*Red/Severe*

Intersection Sequence Number

Data Format: 1 numeric CRASH.ISECT_SEQ_NO

Code	Description
Blank	Crash is Unlocatable
0	Non-intersectional crash
1 - 99	Sequential number assigned to the junction of two roads.

Instructions:

The Intersection Sequence Number identifies which junction of the same two roads has been coded. The number increases for roads that intersect more than once, such as "loops", "circles" and roads that intersect each other at two points more than 50 feet apart.

The default value for Intersection Sequence Number is **"1"**.

Intersection sequence numbers are generally assigned in the order of occurrence of the intersecting roads, from **south** to **north** (for north/south roads), or **west** to **east** (for east/west roads).

City Streets and "Non-Milepointed" County Roads

Use **"1"** to indicate the **southernmost** junction of the through-street that runs north to south, or the **westernmost** junction of the through-street that runs east to west.

Use **"2"** to represent the ***next*** southernmost or westernmost intersection, etc.

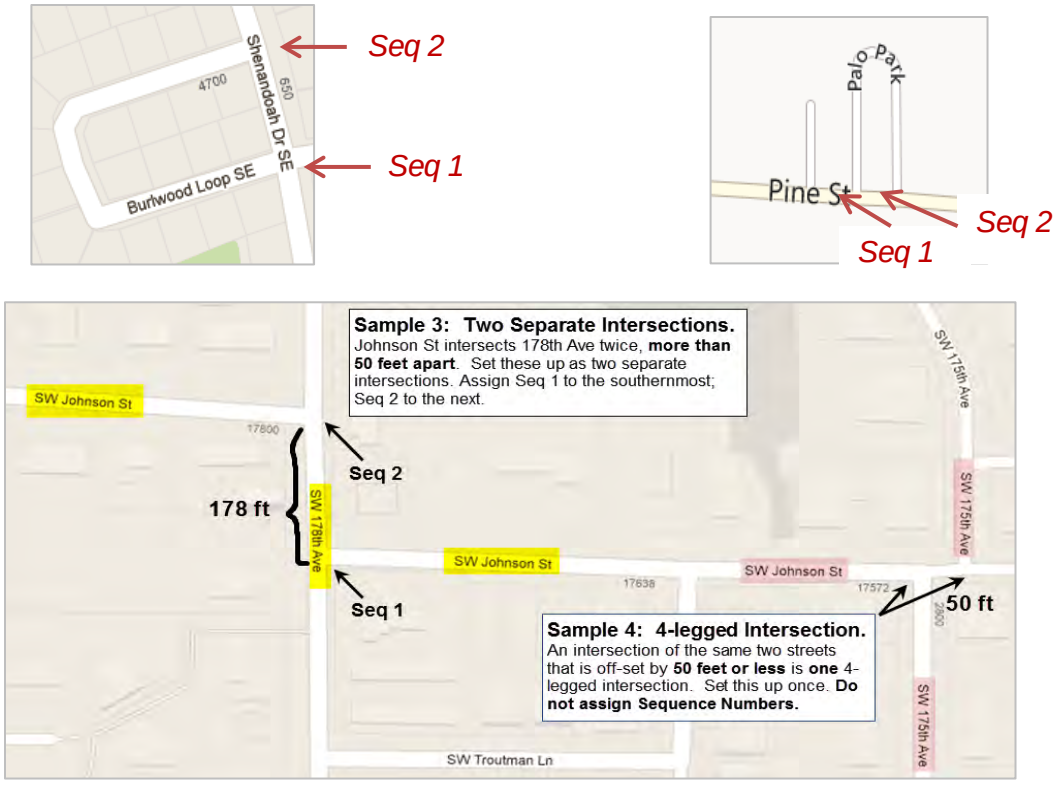


Figure 24: Sequence Examples 1

Intersection Sequence Number

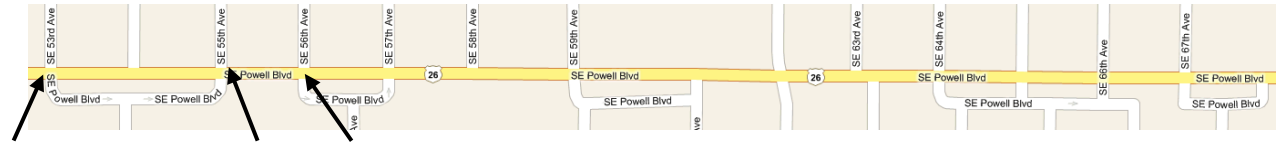
(Continued)

Milepointed County Roads & State Highways

Use **"1"** to represent the **first occurrence** of the intersection according to the **lowest milepoint.** Increase the sequence number for each subsequent milepoint at which the two roads intersect.

Examples:

SE Powell Blvd (Hwy 26) & Powell S Frontage Rd



MP 3.62 Seq# 1

MP 3.71 Seq# 2

MP 3.76 Seq# 3 etc.

Street database view of intersection setups for map of SE Powell Blvd & Powell S Frontage Rd intersections seen in sample, with Intersecting Sequence Numbers circled:

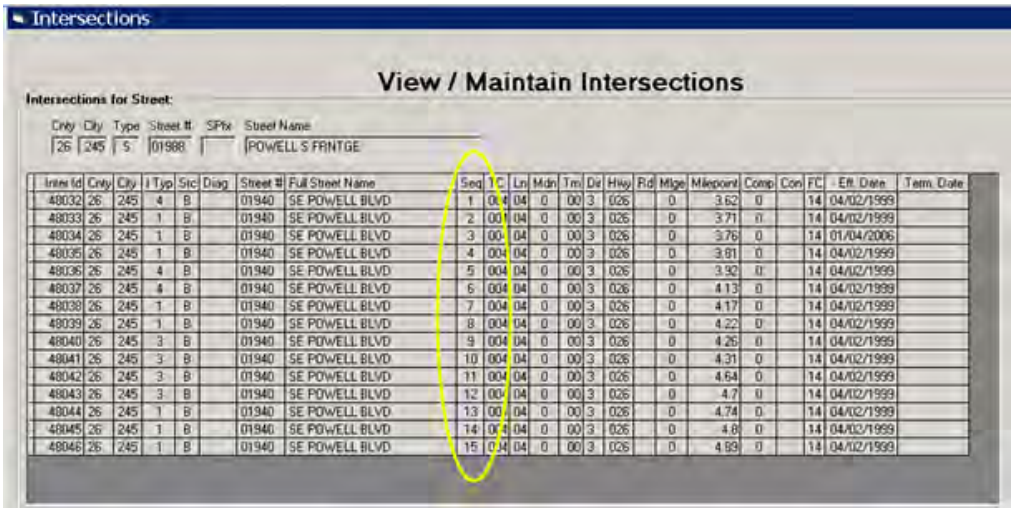


Figure 25: Sequence Examples 2

Validations:

Rule #	Rule Message	Severity
174	*Intersection Sequence Number is required when two streets are specified*	*Red/Severe*
175	*Intersection Sequence Number is not allowed when only one street is specified*	*Red/Severe*
176	*Intersection Sequence Number is not valid for these two streets*	*Red/Severe*

Distance From Nearest Intersection

Data Format: 4 numeric FROM_ISECT_DSTNC_QTY

Code	Description
Blank	Crash occurred on State Highway System or milepointed county road (*except for Lane County)*. Crash occurred on city street or non-milepointed county road where distance from nearest intersection is unknown.
0000	Intersectional crashes within city limits, on non-milepointed county roads, and on Lane county milepointed county roads.
0001 – 9998	Measurement in feet for city streets and hundredths of a mile for non-milepointed county roads, special jurisdiction roads, and Lane County roads.
9999	Distance exceeds 9999 ft., for city street crashes.

Instructions:

This field represents the distance a crash occurred from the nearest intersecting roadway. It is only coded for crashes that occur on city streets, non-milepointed county roads, Lane County roads, and special jurisdiction roads. Coding instructions vary depending on the jurisdiction. For city streets, the code represents a measurement in feet. For non-milepointed county roads, Lane County roads, and special jurisdiction roads, the code represents a measurement in hundredths of a mile.

Using the Crash Locator Tool (CLT) aerial imagery, *begin the measurement* ***at the curb line*** *of the nearest intersecting road*, and end the measurement at the crash location. (The presence and orientation of a crosswalk has no bearing on where the measurement begins.)

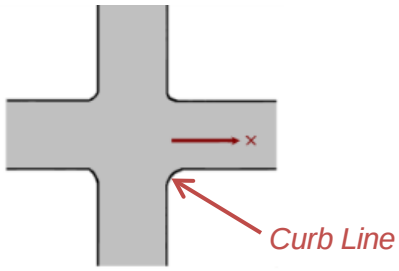


Figure 26: Curb Line

Enter the resulting value into the Data Entry screen. Four digits are required in this field, so enter leading zeros when necessary.

Enter **"0000"** for intersectional crashes inside city limits, non-milepointed county roads, and Lane County roads.

City Streets

For non-intersectional crashes on city streets, code this field using a foot-measurement up to 9,998 feet (omit the comma). If the distance exceeds 9,998 feet and no other reference is available, enter **"9999"**.

If the distance from an intersecting roadway cannot be determined **or approximated**, leave this field blank. Leaving the Distance from Nearest Intersection field blank for city streets creates an unknown location of impact.

Distance from Nearest Intersection

Lane County and Non-Milepointed County Roads

For crashes on non-milepointed county roads, and on Lane County roads, code this field using **hundredths of a mile**. This is necessary because county roads often run for longer distances before intersecting with another road. Distance can exceed the 9,998 foot measurement used for city streets.

For example, if a crash is 1,320 feet from the nearest intersecting roadway, its distance is .25 miles. Code the **Distance from Nearest Intersection** field as 0025. One mile from a specific roadway is coded "0100". An eighth of a mile is coded "0012". *(Refer to the conversion table below.)*

Enter leading zeros; Decimal points are assumed; never coded.

If the distance from an intersecting roadway cannot be determined **or approximated**, leave this field blank.

Figure 27: Conversion Table - Distance from Nearest Intersection Non-Milepointed County Roads

Miles (Hundredths)	Feet	Miles (Hundredths)	Feet	Miles (Hundredths)	Feet	Miles (Hundredths)	Feet	Miles (Hundredths)	Feet
1 Mile	5280	1/5 .20	1056	.40	2112	.60	3168	.80	4224
.01	53	.21	1109	.41	2165	.61	3221	.81	4277
.02	106	.22	1162	.42	2218	.62	3274	.82	4330
.03	158	.23	1215	.43	2270	.63	3326	.83	4382
.04	211	.24	1267	.44	2323	.64	3379	.84	4435
.05	264	1/4 .25	1320	.45	2376	.65	3432	.85	4488
.06	317	.26	1373	.46	2429	.66	3485	.86	4540
.07	370	.27	1426	.47	2482	.67	3538	.87	4594
.08	422	.28	1478	.48	2535	.68	3590	.88	4646
.09	475	.29	1531	.49	2587	.69	3643	.89	4700
1/10 .10	528	.30	1584	1/2 .50	2640	.70	3696	.90	4752
.11	581	.31	1637	.51	2693	.71	3749	.91	4805
1/8 .12	634	.32	1690	.52	2746	.72	3802	.92	4858
.13	686	1/3 .33	1742	.53	2798	.73	3855	.93	4910
.14	739	.34	1795	.54	2851	.74	3907	.94	4963
.15	792	.35	1848	.55	2904	3/4 .75	3960	.95	5016
.16	845	.36	1901	.56	2957	.76	4013	.96	5069
1/6 .17	898	.37	1954	.57	3010	.77	4066	.97	5122
.18	950	.38	2006	.58	3062	.78	4118	.98	5174
.19	1003	.39	2059	.59	3115	.79	4171	.99	5227

Distance from Nearest Intersection

(Continued)

Validations:

Rule #	Rule Message	Severity
38	*Distance from Intersection must be > 0 when Road Character is not 1 (Intersection) and Milepoint is not provided*	*Red/Severe*
39	*Distance from Intersection must = 0 when Road Character = 1*	*Red/Severe*
144	*Distance From Nearest Intersection must be blank if crash occurred on State Highway System*	*Red/Severe*

Direction from Intersection

Data Format: 1 char CRASH.CMPSS_DIR_CD

Code	Description
0	Non-intersectional crash occurred on state highway system outside city limits; crash occurred on a milepointed county road at a non-intersectional location (except for Lane County roads); or in all other cases if direction from second street is unknown.
1	North of nearest intersection
2	Northeast of nearest intersection
3	East of nearest intersection
4	Southeast of nearest intersection
5	South of nearest intersection
6	Southwest of nearest intersection
7	West of nearest intersection
8	Northwest of nearest intersection
9	Center of the Intersection

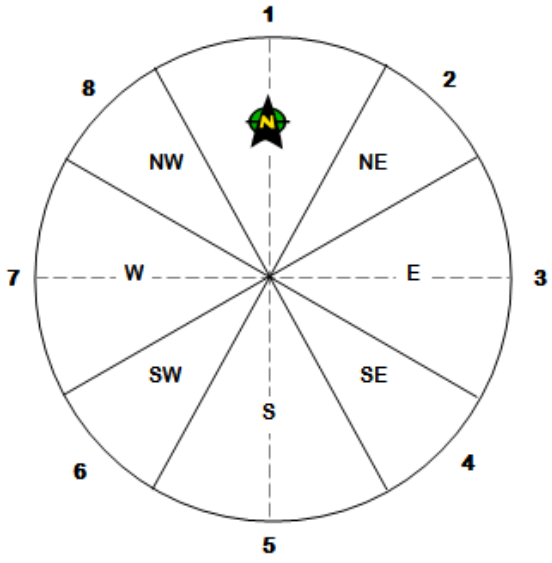


Figure 28: Compass Diagram

Instructions:

The Direction from Nearest Intersection value represents the compass direction *from* the crash *to* the nearest intersection.

The compass transparency image depicted above is placed over **the center of the nearest intersection** on a map or diagram, with the North arrow oriented to. The section in which the crash location falls indicates the Direction from Nearest Intersection, and the Vehicle Movement "From/To" directions.

Use **Code "0"** for the following situations:

- For non-intersectional crashes on milepointed county roads (except for Lane County)
- For non-intersectional crashes on state highways *outside* city limits
- For all other cases when the direction from the nearest intersecting street is unknown.

Use **Code "9"** for crashes that occur at the center of an intersection ("Location of Impact" quadrants 1, 2, 3 or 4). This rule applies to all road types.

For intersectional crashes that occur in "Location of Impact" quadrants 5 or 6, enter the Direction code relative to the center of the intersection.

This diagram shows an intersection with turning legs. The highlighted numbers are the **Direction** codes. The small numbers represent **Location of Impact** codes, with codes "0" and "9" shown on the turning legs.

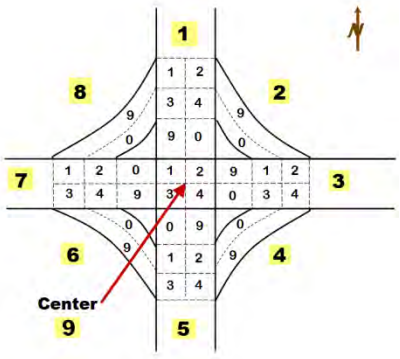


Figure 29: Intersection Direction Diagram

Direction From Nearest Intersection

(Continued)

City Streets and Highways Inside City Limits

All directions are valid, but Crash Data Technicians should use the directions assigned for the specific intersection in the Set-ups or Streets database.

Use **Code "0"** when the direction from the 2nd Street is unknown.

County Roads

Non-milepointed County Roads
For Multnomah and Washington Counties, all direction codes are valid, though intersections should be set up with cardinal directions whenever possible.

For Deschutes county roads, use cardinal directions (1, 3, 5 or 7) only.

Milepointed County Roads
Use cardinal directions only (1, 3, 5 or 7), for intersectional crashes.

Use **Code "0"** for non-intersectional crashes.

Lane County county roads are an exception. Code this field using cardinal directions for all crashes.

State Highways Outside City Limits

Use **Code "0"** for non-intersectional crashes on state highways outside city limits.

Use cardinal directions (1, 3, 5 or 7) for **intersectional** crashes on state highways outside city limits, *based on the predominate direction of the state highway*. In areas where the highway makes an abrupt or significant change in direction, you may need to deviate from the rule of using the highway's predominate direction.

Validations:

Rule #	Rule Message	Severity
42	*When Road Character = 1 and Number of Turn Legs = 0 and Location of Impact = 01, 02, 03 or 04, then Direction from Intersection must = 9*	*Red/Severe*
43	*When Impact Location Code > 04 and Highway No. is null and City ID is not null and Number of Turn Legs is null or 0 then Direction from Intersection must be < 9.*	*Red/Severe*
144	*When City is null and Road Character is not Intersectional and Milepoint is known, then Direction from Nearest Intersection should = 0*	*Yellow/Warning*

Milepoint

Data Format: 5 decimal CRASH.MP_NO

Code	Description
Blank	Crash occurred on City Street or non-milepointed County or Other road.
00000 – 99998	Actual milepoint to the nearest 0.01 mile. Can be a negative number, the decimal point is assumed.
99999	Unknown

Instructions:

Milepoint is a five-digit code used to identify the crash location on a state highway or milepointed county road. The field length will accommodate a negative symbol and a decimal point.

"Milepoint"differs from "milepost". **Mileposts** are physical posts placed on the roadside to mark the distance in miles from the beginning of the highway. The measurements between these posts are referred to as **milepoints**.

The accuracy of the milepoint is very important. The crash location for a milepointed roadway is calculated from information from driver and police reports, and approved highway and public road inventory. Add or subtract mileage from a known milepoint which marks a fixed reference on the highway. *When it's not possible to make a reasonable determination of a milepoint, enter* ***code "99999"*** *in this field.*

Code this field to **the nearest one-hundredth of a mile**. The data entry system will right-justify the number entered and will automatically insert a decimal point. For example, values entered as **245, 2.45**, **00245,** or **002.45** will display in the data entry screen as **2.45**

Leave the Milepoint field blank for crashes on:

- Non-milepointed county roads (described below)
- City streets
- Special jurisdiction roads for which a milepoint is not available

State Highway Milepoints

State Highway milepoints are loaded from the Crash Locator Tool, but verify intersectional milepoints inside city limits against the System Set-ups. Outside city limits, verify state highway intersectional crash milepoints using the Automated Milepoint Logs (AML).

Most highway milepoints represent "normal" mileage, other mileage requires special handling.

Negative (X) milepoints

Negative milepoints, also known as "X" milepoints, are created when a highway is extended beyond its original beginning milepoint (i.e. MP 0.00), in the opposite direction from the increasing milepoints.

(Continued)

Negative milepoints are preceded by a negative sign. Enter a **negative symbol** as the first character of the Milepoint value, and then enter the milepoint number. An entry of **-245** or **-00245** will display as **-2.45**.

Prior to 1989, negative milepoints existed on connections.

Overlapping (Z) milepoints

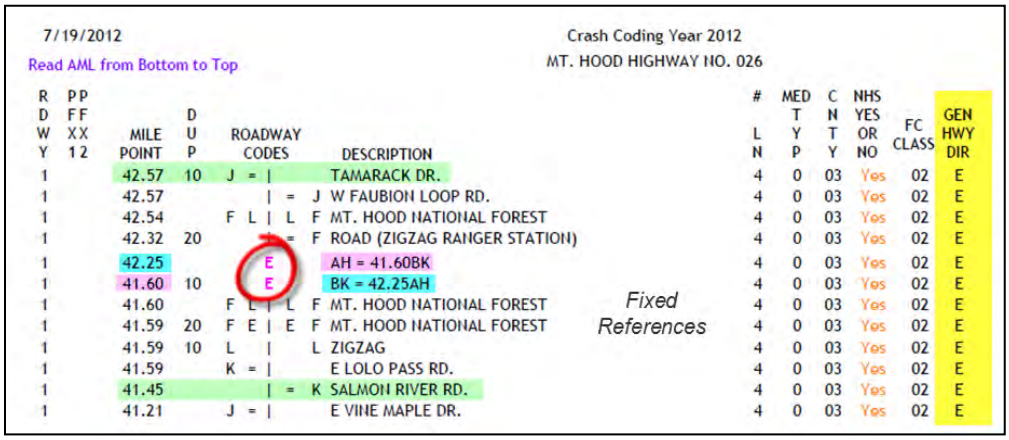
Overlapping milepoints, also known as "Z" milepoints, occur anywhere along a stretch of highway between its beginning and ending milepoints. Z milepoints are assigned to the section of highway that was lengthened due to re-alignment. Enter the milepoint given, and code a **"Z"** in the Mileage Type field.

Refer to the instructions for the "**Mileage Type**" field on page 27 of this manual for information on overlapping Z milepoints.

Milepoint Equations

Milepoint equations are created when an existing highway has been shortened due to construction, such as when a curve is straightened. The milepoint equation specifies **two different** milepoints that now exist **at a single point** on the highway. This is a method of accounting for changes in a linear measurement system without re-milepointing the entire highway.

Milepoint equations are identified in the **AML** by a pink **E** in the middle Roadway Code. In the image below**, MP 41.60 is equal to MP 42.25** and represents the same point on the highway.



7/19/2012 — Crash Coding Year 2012

Read AML from Bottom to Top — MT. HOOD HIGHWAY NO. 026

RDWY	PP FF XX 12	MILE POINT	DUP	ROADWAY CODES	DESCRIPTION		LN	MEDTYP	CNTY	NHS YES OR NO	FC CLASS	GEN HWY DIR
1		42.57	10	J = |	TAMARACK DR.		4	0	03	Yes	02	E
1		42.57		| = J	W FAUBION LOOP RD.		4	0	03	Yes	02	E
1		42.54		F L | L F	MT. HOOD NATIONAL FOREST		4	0	03	Yes	02	E
1		42.32	20	F = F	ROAD (ZIGZAG RANGER STATION)		4	0	03	Yes	02	E
1		42.25		E	AH = 41.60BK		4	0	03	Yes	02	E
1		41.60	10	E	BK = 42.25AH		4	0	03	Yes	02	E
1		41.60		F L | L F	MT. HOOD NATIONAL FOREST	*Fixed References*	4	0	03	Yes	02	E
1		41.59	20	F E | E F	MT. HOOD NATIONAL FOREST		4	0	03	Yes	02	E
1		41.59	10	L | L	ZIGZAG		4	0	03	Yes	02	E
1		41.59		K = |	E LOLO PASS RD.		4	0	03	Yes	02	E
1		41.45		| = K	SALMON RIVER RD.		4	0	03	Yes	02	E
1		41.21		J = |	E VINE MAPLE DR.		4	0	03	Yes	02	E

Figure 30: Automated Milepoint Log (AML) aka Highway Inventory Summary

BK = back; AH = ahead

Calculating Milepoints Involving Milepoint Equations

When the crash location involves a milepoint equation, the Crash Data Technician must calculate the milepoint to be coded. This is a 3-step process, and requires the following information:

Milepoint

(Continued)

- An existing cross-road or boundary to be used as a reference
- The desired distance from the reference cross-road or boundary to the crash location
- The "begin" and "end" Equation milepoints
- The direction of increasing milepoints for the highway

Scenario #1:
Calculate a location **one-half mile east** of Salmon River Rd. on Mt. Hood Hwy 26. Milepoints **increase to the east**, and the crash location is ***east*** of the **Equation *Begin* MP**.

Step 1: Look up the milepoint for Salmon River Rd. in the AML (MP 41.45), and subtract it from the Equation ***Begin MP*** (41.60).

Equation **Begin** MP	41.60
minus Reference MP	-41.45
Reference Distance	**0.15**

Step 2: Subtract the "reference distance" from the distance you need to go eastward.

Distance **Eastward**	0.50
minus Reference Distance	-0.15
Crash Distance	**0.35**

Step 3: Add the result (i.e. Crash Distance) to the Equation End MP to get the crash milepoint.

Equation **End** MP	42.25
plus Crash Distance	+0.35
Crash Milepoint	**42.60**

Scenario #2:
Calculate a location **one-half mile west** of Tamarack Dr. on Mt. Hood Hwy 26. Milepoints ***increase to the east***, and the crash location is ***west*** of the **Equation *End MP***.

Step 1: Look up the milepoint for Tamarack Dr. in the AML (MP 42.57). Subtract the Equation End MP from the Reference MP.

Reference MP	42.57
minus Equation End MP	-42.25
Reference Distance	**0.32**

Step 2: Subtract the "reference distance" from the distance you need to go westward.

Distance **Westward**	0.50
minus Reference Distance	-0.32
Crash Distance	**0.18**

Step 3: Subtract the resulting distance from the Equation Begin MP to get the crash milepoint.

Equation **Begin** milepoint	41.60
minus Crash Distance	-0.18
Crash Milepoint	**41.42**

Milepoint

(Continued)

Note to Crash Data Technicians:
Straightline charts are helpful for determining crash locations, but they're *not to be used as the source for milepoints*. Use the System Set-Up book or AML, which should show the same milepoint as that imported from the CLT. If a discrepancy exists between these resources, speak to the Code Team Leader.

County Road Milepoints
Milepoints for "milepointed county roads" are obtained from the County Road Milepoint Logs stored in the unit reference area.

Leave the Milepoint field blank when coding crashes on county roads in the following counties.

- Deschutes
- Multnomah
- Washington

Validations:

Rule #	Rule Message	Severity
17	*Urban area value entered doesn't match urban area value for this highway/milepoint for this year in ITIS*	*Yellow/Warning*
20	*Functional Class value entered doesn't match functional class value for this highway/ milepoint for this year in ITIS*	*Yellow/Warning*
22	*NHS value entered doesn't match NHS value for this highway/milepoint for this year in ITIS*	*Yellow/Warning*
24	*County value entered doesn't match County value for this highway/milepoint for this year in ITIS*	*Yellow/Warning*
31	*Mileage Type value entered doesn't match Mileage Type value for this highway/milepoint for this year in IT IS*	*Yellow/Warning*
101	*City value entered doesn't match City value for this highway/milepoint for this year in IT IS*	*Yellow/Warning*
130	*Milepoint value not valid for the specified Highway in the specified Crash Year*	*Yellow/Warning*
131	*When entered, the milepoint value must be <= 999.99*	*Red/Severe*
133	*Milepoint is required when Highway Number is entered*	*Red/Severe*
146	*Highway Couplet begins or ends at this milepoint. Please confirm whether crash occurred on*	*Yellow/Warning*
178	*When City is not null and Highway is not null and milepoint is known, then Intersecting St #*	*Red/Severe*
1026	*Milepoint must be null when Highway Number is null and crash occurred inside city limits.*	*Red/Severe*

Posted Speed

Data Format: 2 char CRASH.POST_SPEED_LMT_VAL

Code	Description
Blank	Unknown or Not Reported. Information is not available on posted speed.
00	No statutory limit (i.e. private road open to public, such as logging, etc.)
05-70	Actual Posted Speed

Instructions:

Posted Speed represents the regulatory speed posted for the section of road on which the crash occurred.

This field is only coded when information regarding posted speed is available from the PAR, AML, or loaded from the Crash Locator Tool (CLT). For all other situations, leave this field blank.

On state highways, if the posted speed on the PAR conflicts with the ODOT highway inventory (AML, CLT), use the speed provided by the highway inventory. The exception to this rule is for highways where a work zone has temporarily changed the posted speed.

For all other roads, use the speed listed on the PAR.

See “Traffic Control Device” for the definition and examples of regulatory signs.

Validations:

Rule #	Rule Message	Severity
45	*When entered, Posted Speed Limit value must be <= 65*	*Red/Severe*

Road Character

Data Format: 1 char CRASH.RD_CHAR_CD

Code	Description	Code	Description
1	Intersection	7	Grade / Hill (vertical curve)
2	Driveway or alley access	8	Bridge structure (including overpass and underpass)
3	Straight roadway	9	Tunnel
4	Transition (change in number of lanes)	0	Unknown
5	Curve (horizontal curve)		
6	Open access or turnout		

Instructions:

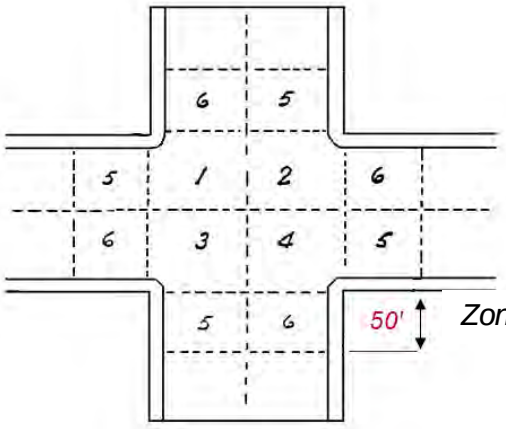
Road Character refers to the alignment, contour, structure, or other distinctive feature that describes the roadway at the crash location.

The proper coding of this data element is critical to the crash record, since this element controls the analysis between intersectional crashes and non-intersectional crashes.

Intersectional Crashes

Use Code "1" for all **intersectional crashes**. This rule applies to all road jurisdictions (city streets, county roads, and state highways). Intersectional crashes are never coded to zones 7 or 8.

Quadrants 1, 2, 3 and 4 represent the center of the intersection.



Zones 5 and 6 extend 50

Figure 31: Intersectional Crashes

Definition: *Any crash that occurs within the limits (the extended curb lines) of the intersection of two or more roads, or any crash that occurs outside the center of the intersection, within location of impact zones 5 or 6, and as a direct result of some maneuver at or because of the intersection, will be classed as intersectional and so coded.*

Additional Rules for "Intersectional" Crashes

Conditions surrounding an accident that occurred outside the limits of an intersection must justify the classification of "intersection".

Road Character

(Continued)

For example:

Rear-End Collisions at Intersections
Rear-end collisions involving a vehicle first in line at the intersection should be coded as intersectional.

Turning Maneuvers at Intersections
A crash involving a turning movement is classified as "intersectional" when the crash results from the turning movement and the impact is within location of impact zones 5 or 6. When the point of impact is beyond location of impact zones 5 or 6, the turning movement should have been completed and the **Road Character** should be coded as "non-intersectional".

Pedestrian Collisions at Intersections
If a pedestrian is struck while crossing from one corner of an intersection to another, code the Character of Road as **intersectional**. If a pedestrian is struck while crossing within a marked or unmarked crosswalk at the intersection, code **Road Character** as intersectional.

Complex Intersections
Complex intersections and interchanges are areas where more than one road character exists. This could be an intersection that occurs at a curve or on an overpass/bridge etc. When an *intersectional crash* occurs at a complex intersection, the **Road Character** is coded as intersection. Other road characters that exist at the intersection and are relevant to the crash should be identified through the Event field or Related Flags.

Non-intersectional crashes that occur outside the intersection, but are related to movement or control of traffic through the intersection, may be "Intersection-Related". See page 63 for information on Intersection-Related crashes.

Non-Intersectional Crashes

Crashes that don't meet the definition of "intersectional" are "non-intersectional". Non-intersectional crashes can occur **within the area of** a complex intersection or interchange, on a curve, bridge, etc. In such cases, the **Road Character** field must be coded as the curve, bridge, etc. rather than as an intersection.

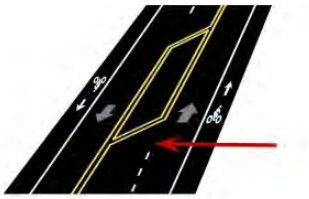
Code "2" is used for crashes at **driveways** or **alley access**.

Code "3" is used for crashes on **straight roads** that don't involve transitioning lanes, driveways, turn-outs, hills, bridges, curves, or tunnels.

Road Character

(Continued)

Code "4" is used for crashes involving a lane **transition**.



Code "5" is used for crashes involving a horizontal **curve**.

Code "6" is used for crashes involving an "**open access**" or turnout, i.e, a space adjacent to a road where vehicles may pull off to enable other vehicles to pass.

Code "7" is used for crashes that occur on a grade, vertical slope, hill, etc.

Code "8" is used for crashes that occur **on** or **under** a bridge structure.

Code "9" is used for crashes that occur inside a tunnel.

Road Character

(Continued)

Coding Priority

More than one **Road Character** may exist at a crash location. For example, a crash may occur at a driveway on a hill, or on a curve built into a tunnel. In order to maintain consistency in how this field is coded by the data entry team, the following rules assign priority.

Intersections: If a crash occurs within an intersection as a result of a maneuver at or because of the intersection, code 1 takes precedence.

Driveways or alley access: When a crash involves a movement **into** or **out of** a driveway or alley access, code 2 takes precedence.

Bridge over-crossings and under-crossings: When a crash occurs **on** or **under** a bridge, code 8 takes precedence.

Grade (Hill) vs. Curve: When a crash location is on a vertical grade with a curve, code 7 takes precedence, unless the police report specifies that the driver failed to negotiate the curve.

Grade (Hill) vs. Turnout: When a crash involves a turnout on a grade, code 6 takes precedence.

Tunnel: If a crash occurs in a tunnel, code 9 takes precedence.

Validations:

Rule #	Rule Message	Severity
38	*Distance from Intersection must be > 0 when Road Character is not 1 (Intersection) and Milepoint is not provided*	*Red/Severe*
39	*Distance from Intersection must = 0 when Road Character = 1*	*Red/Severe*
42	*When Road Character = 1 and Number of Turn Legs = 0 and Location of Impact = 01, 02, 03 or 04, then Direction from Intersection must = 9*	*Red/Severe*
48	*Location of Impact must be 01,02,03,04,05,06 when Road Character = 1*	*Red/Severe*
51	*Intersection Type Code must be null when Road Character does not indicate "Intersection" (1)*	*Red/Severe*
53	*Intersection Related Flag must be 0 when Road Character = 1*	*Red/Severe*
56	*Number of Lanes must be null when Road Character indicates Intersection (1)*	*Red/Severe*
57	*Number of Lanes must be specified (numeric value) when Road Character is something other than Intersection (1)*	
59	*Number of Legs must be numeric when Road Character is Intersection (1)*	*Red/Severe*
60	*Median Type Code must be null when Road Character indicates Intersection (1)*	*Red/Severe*
114	*Number of Legs must be null or zero when Road Character<> 1 (Intersection)*	*Red/Severe*
129	*Median Type is required when Road Character <> 1 (Intersection)*	*Red/Severe*
179	*When Road Character = 1 and Number of Turning Legs >=1, and Direction does not equal 9 then Location of Impact must be 00,01,02,03,04,05,06 or 09*	*Red/Severe*

Off Roadway

Data Format: 1 char CRASH.OFF_RDWY_FLG

Code	Description
0	No
1	Yes

Instructions:

Off Roadway is a "yes / no" field that indicates where the crash occurred in relation to the roadway. This field should be coded *according to the location of the first harmful event*. Crashes are considered "off roadway" if the first harmful event occurs outside the travel portion of the road (i.e. on the shoulder, roadside, parking lanes, etc.)

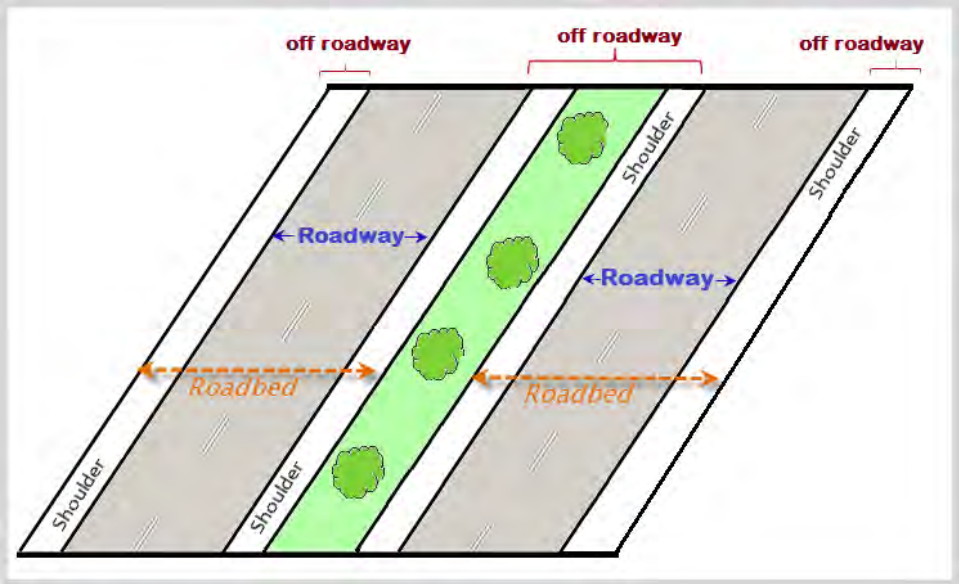


Figure 32: Off Roadway Diagram

Definition: "Roadway" is the part of a trafficway designed, improved, and ordinarily used for vehicular travel. The boundary lines are the lateral limits of the traffic lanes. Parking lanes and shoulders are not part of the roadway. A parking lane ceases to exist and is considered a traffic lane when parking along a street is prohibited.

Code "0" is used when the first harmful event of the crash occurred *on* the roadway. When a vehicle overturns on the roadway first and continues its path off-road, the crash is considered to have occurred "on the roadway". Collisions with over-crossing structures are considered to be "on the roadway" if the structure was hit while the vehicle was traveling directly under it and within the travel lane.

Code "1" is used when the first harmful event of the crash occurred *off* the roadway. Crashes that occur with solid median barriers are considered "off roadway", as are crashes that occur on an earth, grass median.

Off Roadway

(Continued)

If the Crash Type coded is **"8 – Fixed Object"** and the Collision Type coded is **"9 – Fixed Object"**, then Off Roadway **must** be coded **"1 – Yes"** unless one or more of the following events are coded for the striking vehicle:

049 – Bridge girder or other horizontal structure overhead
063 – Tree branch or other vegetation overhead, etc.
064 – Wire or cable across or over the road
067 – Slides, rocks off or on road, falling rocks
073 – Other bump (not speed bump), pothole or pavement irregularity (Per PAR)
074 – Other overhead object (highway sign, signal head, etc.); not bridge
127 – Rock slide or land slide

Validations:

Rule #	Rule Message	Severity
49	*Value must be 1 for Yes or 0 for No*	*Red/Severe*
147	*This is a rare occurrence. Please verify whether this "fixed object crash" occurred on or off the roadway*	*Yellow/Warning*
356	*Off Roadway Flag must = 1 if Crash Type = Fixed Object and Collision Type = Fixed Object and the Striking Vehicle Event Codes do not equal 049, 063, 064, or 067*	*Red/Severe*

Intersection Type

Data Format: 1 char CRASH.ISECT_TYP_CD

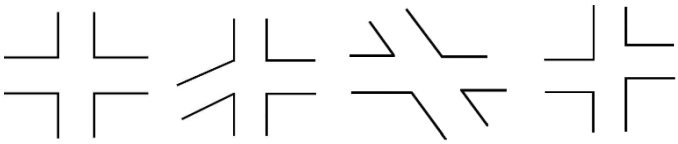
Code	Description	Code	Description
Blank	Not intersectional	5	5-legged
0	Unknown intersection type	6	6-legged
1	Cross	7	7-legged
2	2-legged	8	8-legged
3	3-legged	9	9-legged
4	4-legged		

Instructions:

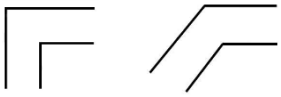
Intersection Type is a one-digit code that indicates the way in which two or more roads meet or cross. **Code this field for "intersectional" crashes only** (refer to Character of Road for definition on page 56. For all other crashes, leave this field blank.

Code "0" is ***only*** used when the intersecting street is unknown and there is no description provided about the intersection type.

Code "1" is used for cross-type intersections:

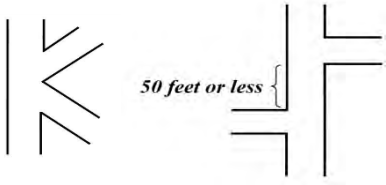


Code "2" is used for two-legged intersections:



Code "3" is used for three-legged intersections:

Code "4" is used for four-legged intersections, and for cross-streets that are off-set by 50 feet or less and are controlled by a common traffic control device:



Code "5" is used for five-legged intersections:

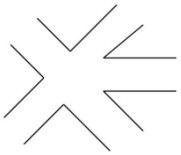
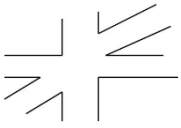


Figure 33: Intersection Types

Code "6" is used for six-legged intersections:



Intersection Type

(Continued)

Codes "7", "**8"** and "**9"** are available for rare intersections with more legs.

Validations:

Rule #	Rule Message	Severity
51	*Intersection Type Code must be null when the Road Character <> 1 (Intersection)*	*Red/Severe*

Intersection Related

Data Format: 1 char CRASH.ISECT_REL_FLG

Code	Description
0	No
1	Yes

Instructions:

Intersection Related is a yes / no field that indicates whether a *"non-intersectional"* crash occurred as a result of movement or control of traffic through a nearby intersection.

Code "0" is used for "intersectional" crashes, and for non-intersectional crashes that are ***not*** related to the movement or control of traffic through a nearby intersection.

Code "1" is used for non-intersectional crashes that result from an activity, behavior, or control related to the movement of traffic units through an intersection.

Examples:

1. A rear-end crash that involved the first vehicle stopped at an intersection. Code **Intersection-Related Flag** as "0" – No, Code **Character of Road** as "1" – Intersection

2. A rear-end crash that involves the second and third vehicles at an intersection, but not the first vehicle. The crash report indicates that the crash occurred due to activity, behavior, or control at the intersection, code **Intersection-Related Flag** as "1" – Yes. Do ***not*** code **Character of Road** as "1" – Intersection

Validations:

Rule #	Rule Message	Severity
53	*Intersection Related Flag must be 0 when Road Character = 1*	*Red/Severe*

Roundabout

Data Format: 1 char CRASH.RNDBT_FLG

Code	Description
0	No
1	Yes

Instructions:

Roundabout is a yes / no field that indicates whether or not a crash is related to the movement or control of traffic through a roundabout or traffic circle.

Use **Code "0"** when the crash location is not at a traffic circle or roundabout. The Crash Data Entry screen defaults to Code "0".

Use **Code "1"** when the crash occurred at a traffic circle or roundabout.

Roundabout – a circular intersection with yield control for all entering traffic, channelized approaches, counter-clockwise circulation around a central island, and appropriate geometric curvature to ensure that travel speeds on the circulatory roadway are typically less than 30 mph.

Figure 34: Roundabouts

Traffic Circle – an older-style circular intersection with channelized approaches, but that does not mandate a yield control for all entering traffic.

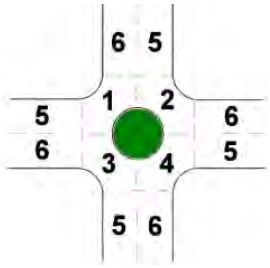


Figure 35: Traffic Circle showing Location of Impact Codes

Validations:

Driveway Related

Data Format: 1 char CRASH.DRVY_REL_FLG

Code	Description
0	No
1	Yes

Instructions:

Driveway Related is a yes / no field that indicates whether a crash is due to the movement of traffic or activity at a driveway or alley access but did not involve the traffic units using the driveway. **If Character of Road is driveway, this field must be coded "0".**

Code "0" is used when the crash is *not* related to the movement of traffic into, out of, or across a driveway or alley access, even if a driveway or alley access exists at the crash location.

Code "1" is used when the crash is due to the movement of traffic or activity at a driveway or alley access but did not involve the traffic units using the driveway.

If a crash involves a traffic unit that is using a driveway at an intersection, then Character of Road = 1 (Intersection) and Driveway Related = 1 (Yes).

If a driveway exists at an intersection, but is not being used, Character of Road = 1 (Intersection) and Driveway Related = 0 (No).

Driveway

Driveway at intersection

Figure 36: Driveways

Validations:

Number of Lanes

Data Format: 2 numeric CRASH.LN_QTY

Code	Description
Blank	Crash occurred inside intersection.
01-98	Number of all travel lanes, both directions added (Except for highway couplets)
99	Unknown number of lanes

Instructions:

Number of Lanes is a two-digit code that represents the total number of travel lanes for the involved road.

Code all the travel lanes for both directions of travel, even if the crash occurred on a divided highway (a code change from coding procedures used prior to 2003). The only exception to this rule is for crashes on HPMS **couplets** on state highways. *For HPMS couplets, limit the number of lanes to the roadway on which the crash occurred.*

Continuous left turn lanes are not included in the count of travel lanes, unless the crash involved the continuous left turn lane.

Validations:

Rule #	Rule Message	Severity
56	*Intersection Related Flag must be 0 when Road Character = 1*	*Red/Severe*
57	*Number of Lanes must be specified (numeric value) when Road Character is something other than Intersection (1)*	*Red/Severe*

Number of Turning Legs

Data Format: 2 numeric CRASH.TURNG_LEG_QTY

Code	Description
Blank	Non-intersectional crash
00	No turning legs at intersection
01 - 98	Actual number of turning legs at intersection
99	Unknown number of turning legs

Instructions:

Number of Turning Legs is a two-digit code that indicates the number of turning legs at an intersection where a crash occurs. Turn lanes are not coded in this field.

Turning Leg (configuration recognized in crash coding) is a travel lane for channelizing traffic at right-angles most commonly found at an intersection (not to be mistaken for a **right turn lane**). A common form of turning leg is noted by a triangular shaped island, raised curb, or painted, that separates right-turning traffic from through traffic at an intersection.

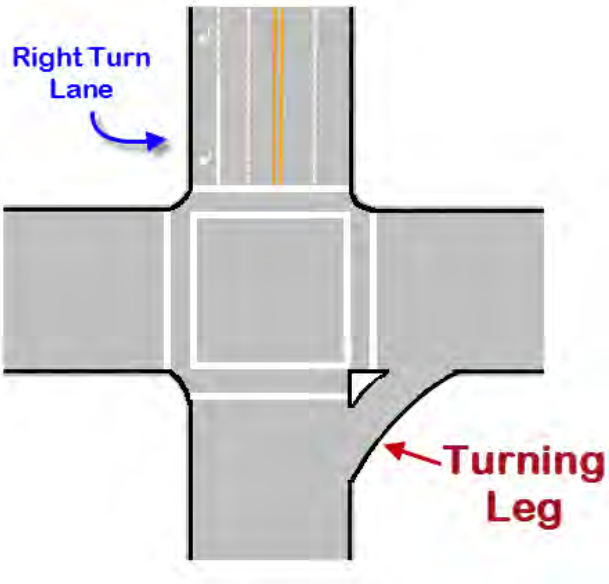


Figure 37: Turning Leg Diagram

Validations:

Rule #	Rule Message	Severity
42	*When Road Character = 1 and Number of Turn Legs = 0 and Location of Impact = 01, 02, 03 or 04, then Direction from Intersection must = 9*	*Red/Severe*
59	*Number of Legs must be numeric when Road Character is Intersection (1)*	*Red/Severe*
114	*Number of Legs must be null or zero when Road Character is <> 1 Intersection)*	*Red/Severe*

Median Type

Data Format: 1 char CRASH.MEDN_TYP_CD

Code	Description
Blank	Crash occurred inside intersection
0	No physical barrier between opposing traffic on single road bed.
1	Raised median, planter or barrier
2	Earth or grass median separating opposing traffic on two road beds

Instructions:

Median Type is a one-digit code that indicates the type of separation that divides opposing traffic along a roadway.

Code "0" is used for continuous left turn lanes, highway couplets, and paved/painted medians.

Code "1" is used for metal guard rails, concrete barriers, curbing, planters or other fixed barriers separating opposing directions of traffic on one roadbed.

Code "2" is used for roadways divided by earth or vegetation which may include a cable or guard rail in the center.

When using Vehicle Level Action Code 029 (*vehicle crossed, plunged over, or through median barrier*) or 033 (*vehicle crossed earth or grass median*), use the Digital Video Log (DVL) or aerial imagery to verify the correct median type has been coded.

Validations:

Rule #	Rule Message	Severity
60	*Median Type Code must be null when Road Character indicates Intersection (1)*	*Red/Severe*
129	*Median Type is required when Road Character <> 1 (Intersection)*	*Red/Severe*

Location of Impact

Data Format: 2 char CRASH.IMPCT_LCT_CD

Code	Description
	Varies, see below

Instructions:

Location of Impact is a two-digit code that describes where the first harmful event occurred in relation to the roadway. Coding of this field is influenced by the following factors. Instructions for each situation are presented in their own sections below:

- The crash is intersectional
- The crash is not intersectional and occurred on a city street
- The crash is not intersectional and occurred on a state highway
- The crash is not intersectional and occurred on a county road or other jurisdiction

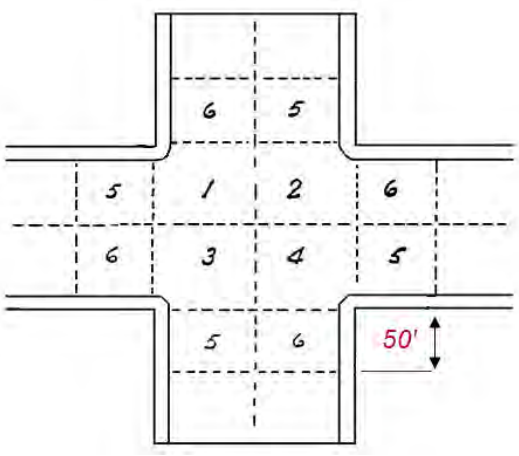
Intersectional Crashes

Code	Description
00	Left lane of a two lane turning leg
01 – 04	Quadrant representing the center of the intersection (see diagram)
05 – 06	Zone on approach or exit
09	Right lane of a two lane turning leg or a single lane turning leg

Location of Impact is coded the same way for all intersectional crashes, irrespective of road jurisdiction. Refer to Character of Road, page 56, for the definition of **"Intersectional Crashes"**.

Quadrants 01, 02, 03 and 04 represent the center of the intersection, with quadrants 01 and 02 always oriented towards the north or northerly direction of the road.

Zones 05 and 06 extend 50 feet from the junction of the intersecting roads. Use Code **"05"** or **"06"** for crashes that occur as a direct result of movement at or because of the intersection when the first harmful event involves the first vehicle stopped outside the center of the intersection.



Note: The leading zero for the Location of Impact codes is not shown in the diagrams that follow.

Zones 05 and 06 extend 50'

Figure 38: Location of Impact Diagram 1

Location of Impact

(Continued)

Coding Location of Impact for Turning Legs

This diagram shows an intersection with turning legs. The larger highlighted numbers are the ***Direction from Intersection*** codes. The smaller numbers represent **Location of Impact** codes.

Use **Code "09"** when the turning leg has only **one lane**.

When the turning leg has **two lanes**, use **Code "09"** for the right-hand lane entering or exiting the intersection. Use **Code "00"** for the other lane on the turning leg.

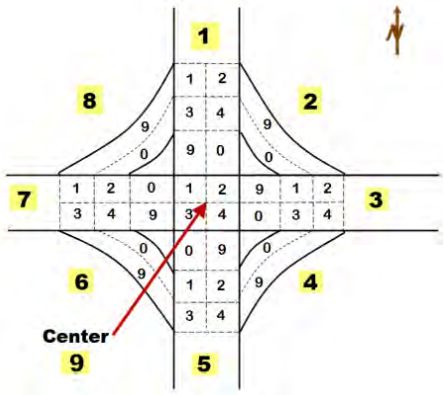
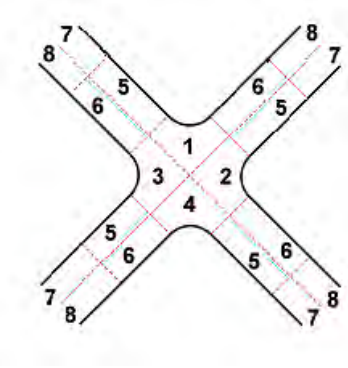


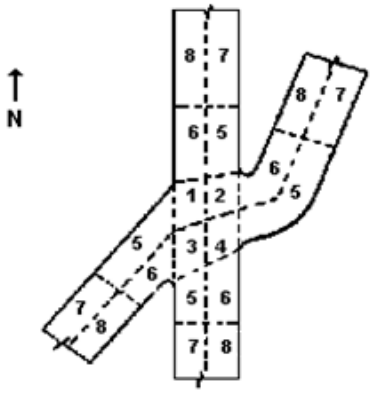
Figure 39*: Intersection Turning Legs*

Location of Impact Schematics

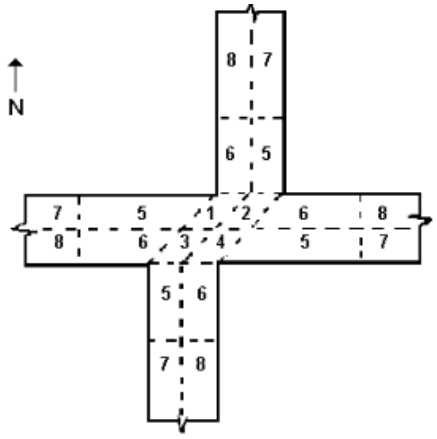
Intersection Type 1



Intersection Type 1



Intersection Type 1, Off-set



Intersection Type 1, Off-set

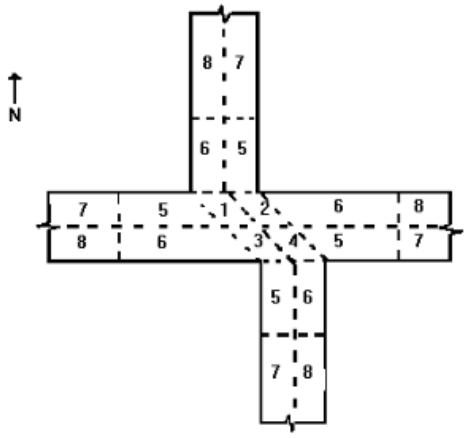
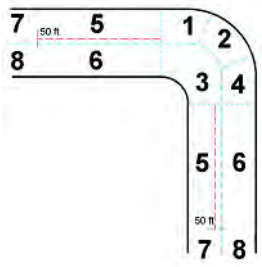


Figure 40: Location of Impact Diagrams 1

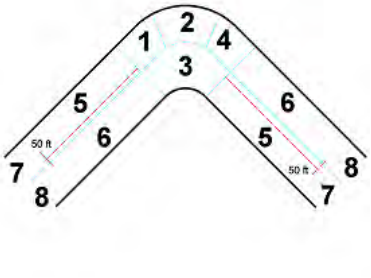
Location of Impact

(Continued)

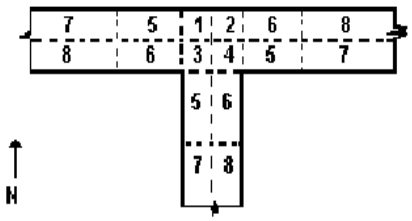
Intersection Type 2



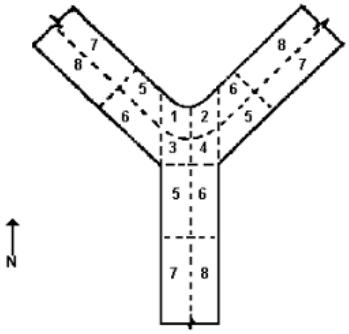
Intersection Type 2



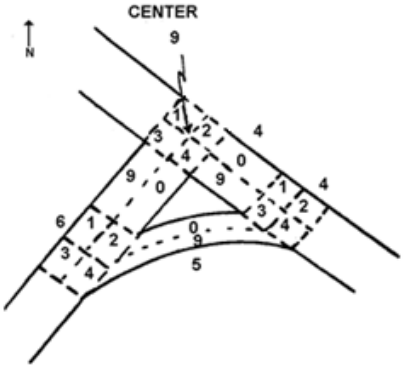
Intersection Type 3



Intersection Type 3



Intersection Type 3, with 1 turning leg



Intersection Type 3, with 2 turning legs

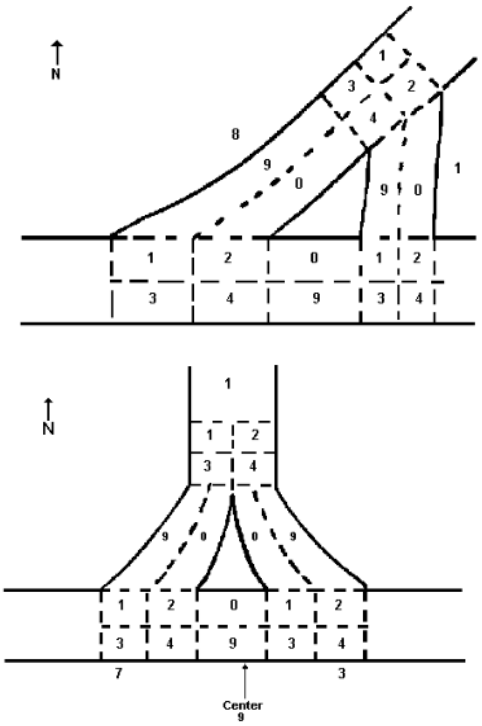
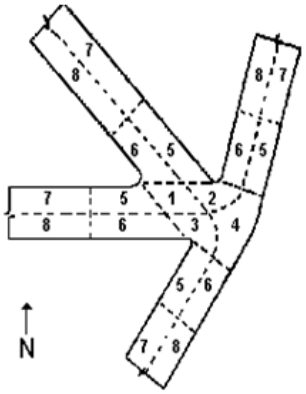


Figure 41: Location of Impact Diagrams 2

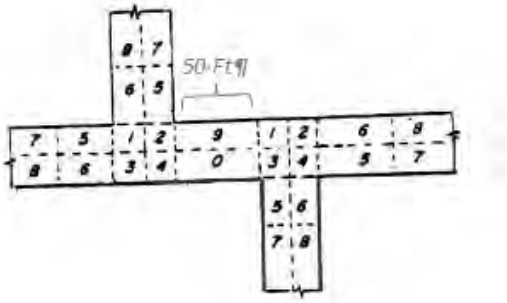
Location of Impact

(Continued)

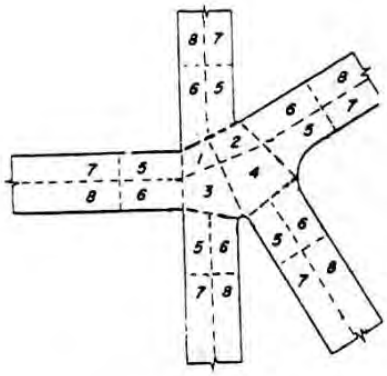
Intersection Type 4



Intersection Type 4 - Offset



Intersection Type 5



Intersection Type 6

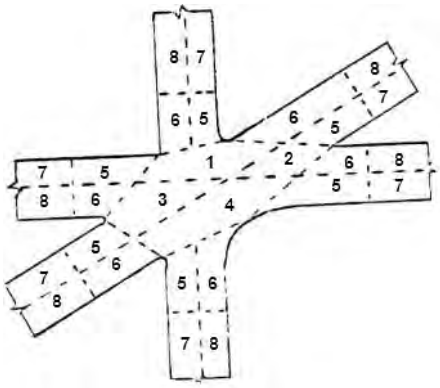


Figure 42: Location of Impact Diagrams 3

Non-Intersectional Crashes on City Streets

Code	Description
00	Crash location unknown
05 – 06	Zone within 50 feet of intersection
07 – 08	Zone 51 feet to mid-block. Reverse these codes at mid-block to reference from the next nearest intersecting road

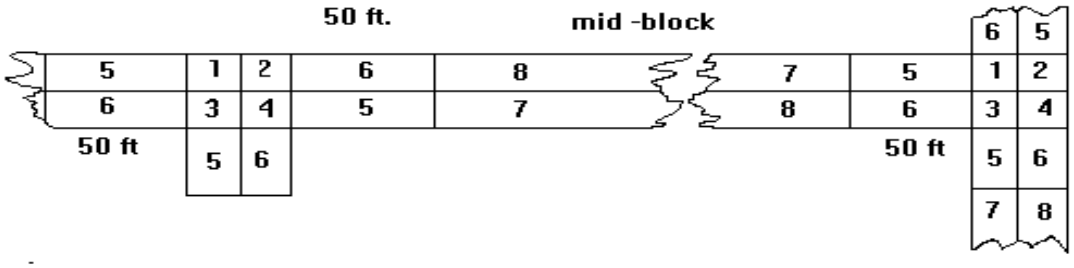


Figure 43: City Streets Diagram

Location of Impact

(Continued)

City streets are divided into quadrants and zones. Quadrants 01, 02, 03 and 04 represent the center of the intersection. A non-intersectional crash on a city street is coded to zone 05, 06, 07 or 08.

Zones 05 and 06 represent areas within 50 feet approaching or exiting the intersection. Use **Code "05"** for the **first zone on the left** at the intersection curb line. Use **Code "06"** for the **first zone on the right** at the intersection curb line.

Zones 07 and 08 represent areas 51 feet away from the intersection and go to the middle of the block. These two zones reverse at mid-block to reference from the next nearest intersection. Use **Code "07"** for the **second zone on the left**. It extends from zone 05 to mid-block. Use **Code "08"** for the **second zone on the right**. It extends from zone 06 to mid-block.

Use **Code "00"** if the location of impact is unknown.

Non-Intersectional Crashes on County Roads

Code	Description
00	Unknown
01	Same direction – beyond shoulder
02	Same direction – shoulder
03	Intended direction of travel of "striking vehicle" (One or more lanes)
04	Centerline or center turn lane
05	Opposing direction – traffic lane(s)
06	Opposing direction – shoulder
07	Opposing direction – beyond shoulder

The Location of Impact field is not intended to identify the ***lane*** in which the impact occurred, for non-intersectional county road crashes. This field identifies the ***side of the road*** on which the impact occurred, and ***whether the striking vehicle was outside of its normal lane of travel*** at the time of the crash.

Non-intersectional county road crashes are coded with reference to the appropriate *side of the road the striking vehicle **should** be traveling on.* (See **Vehicle Number** for information about the "striking vehicle".

For non-intersectional county road crashes, the travel lane of the striking vehicle = "03". All other lane numbers ascend from that lane. Code the off-road location *on the striking vehicles' side of the roadway* as "01". Code the shoulder of the road as "02", centerline as "04" and the opposing lane as "05". Code the shoulder *on the opposing side* as "06" and the off-road location on the opposing side as "07".

The following illustrations are presented for clarification on how to code Location of Impact for crashes non-intersectional crashes on county roads.

Location of Impact

(Continued)

Example 1: Turning Into driveway, or U-turns: Striker is driving in his "intended direction of travel lane" prior to turning into a driveway or making a U-turn.

Example 2: Turning out of driveway: Striker leaves driveway from the location of impact code area 1. See the following examples.

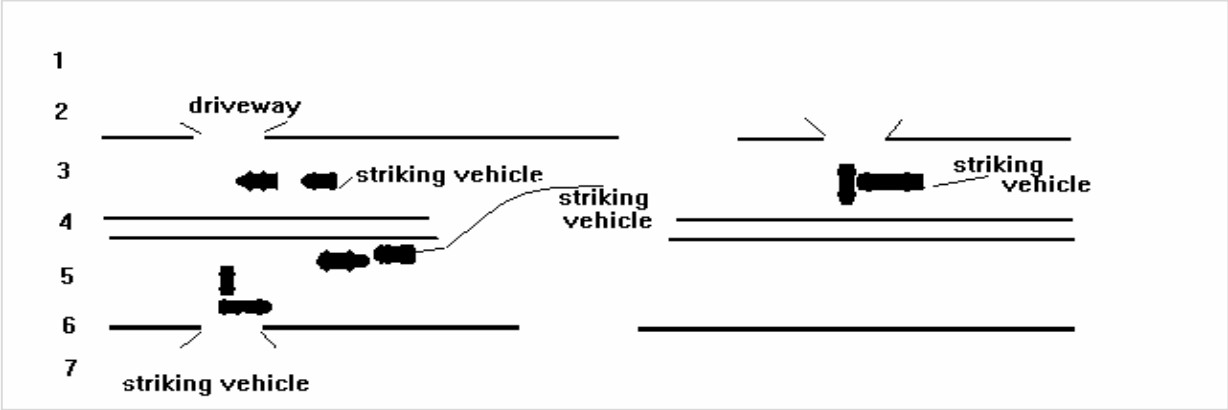


Figure 44: Striking Vehicle Diagram

Non-Intersectional Crashes on State Highways

Code	Description
00 - 14	Varies according to median and number of lanes (see examples)

All highway system crashes are located by milepoint. Location of Impact is coded based on the following fields:

- Number of Lanes
- Median Type, and
- The direction in which the highway milepoints increase

Code "01" indicates that the crash occurred off roadway, *in the direction of the increasing milepoints*.

Code "02" represents the shoulder of the road.

Code "03" represents the right-hand lane of travel in the direction of increasing milepoints.

The codes increase sequentially according to the number of lanes and type of median on the highway.

The following pages show common examples of highways, according to the direction of the increasing milepoints (South, North, East and West), the number of travel lanes, and the type of median present.

The numbers in the middle or on the side of each schematic represents the Location of Impact code for that area.

Location of Impact

(Continued)

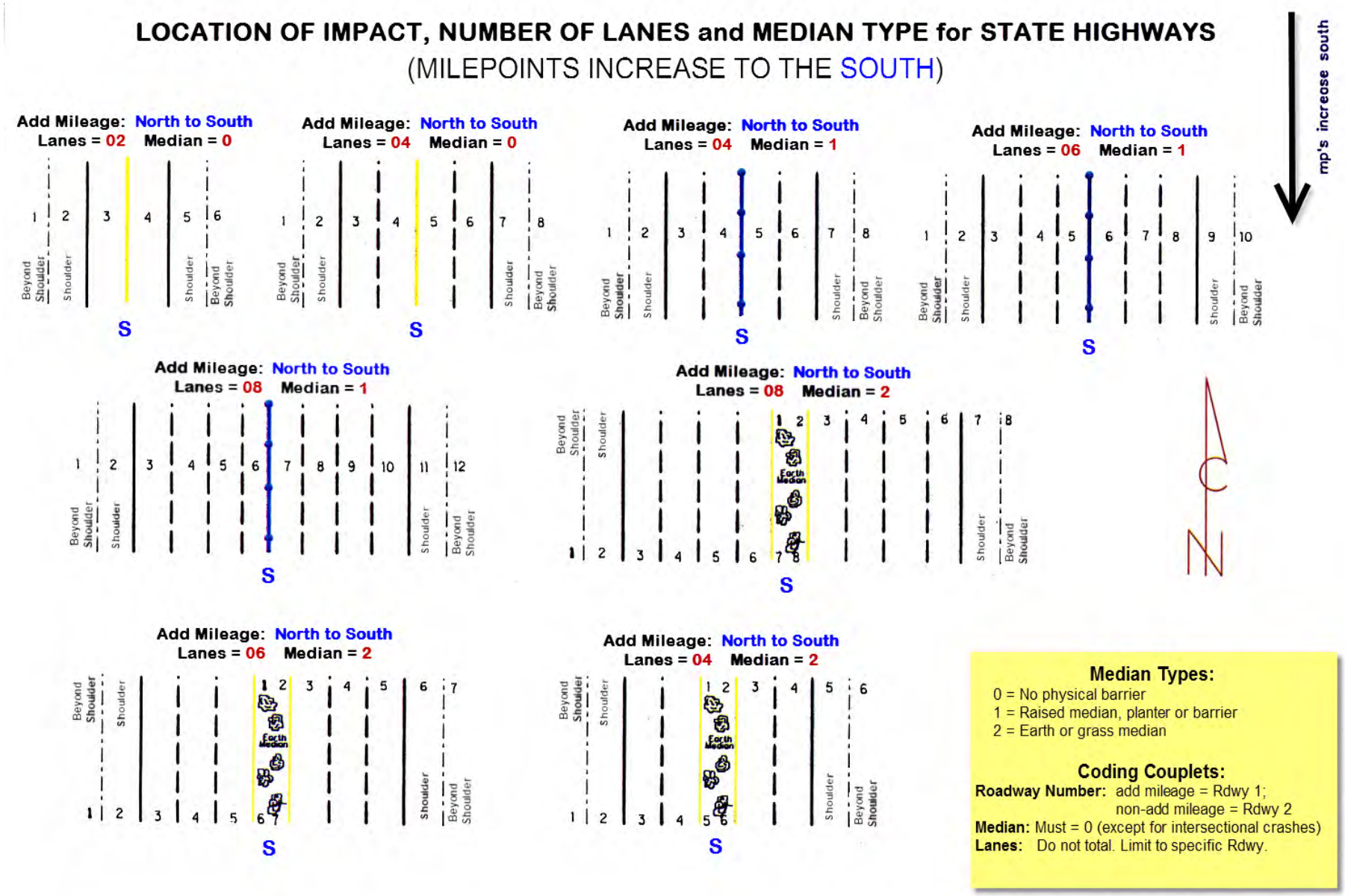
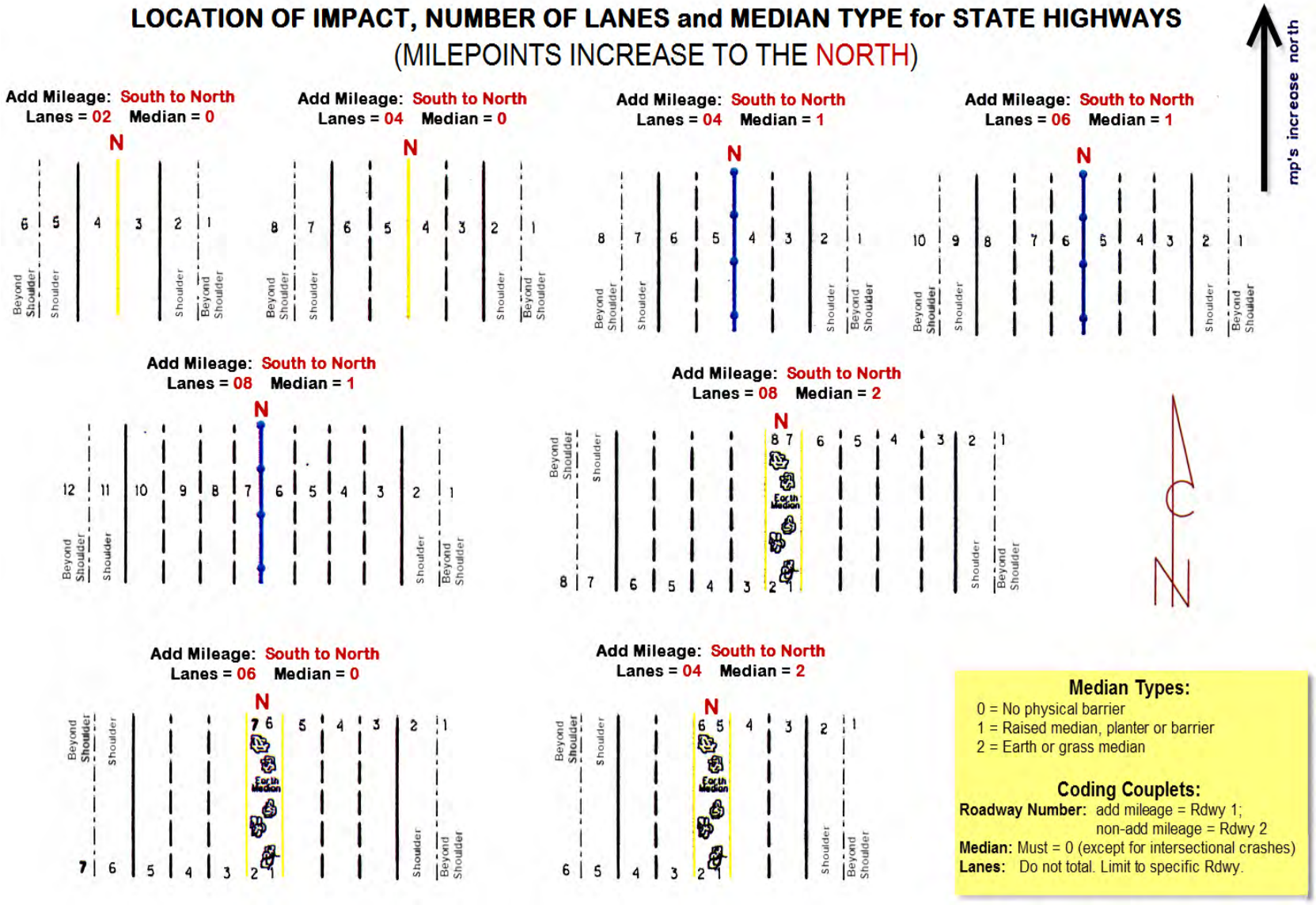


Figure 45: Location of Impact Diagrams 4

Location of Impact

(Continued)

Figure 46: Location of Impact Diagrams 5



Location of Impact

(Continued)

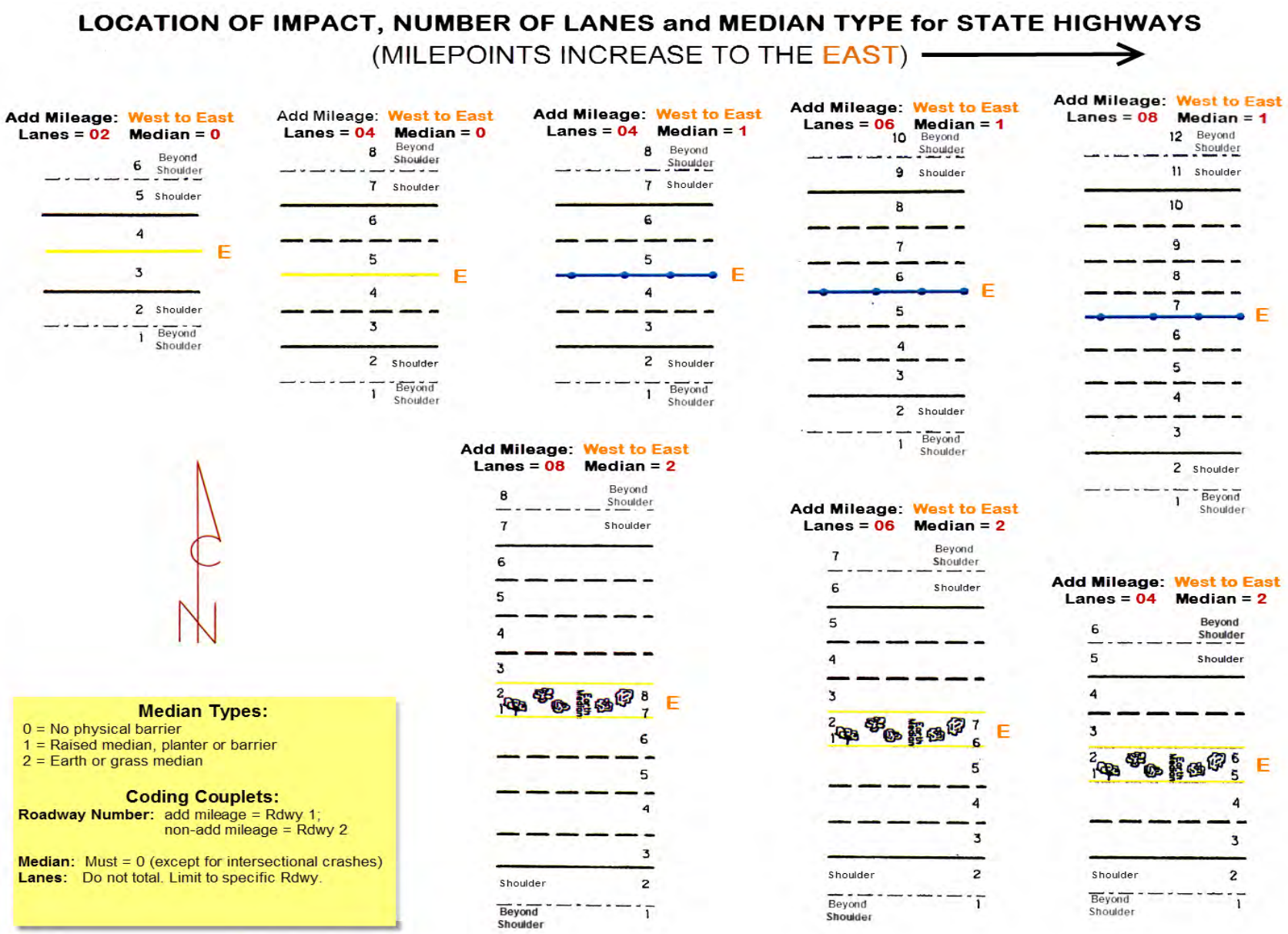


Figure 47: Location of Impact Diagrams 6

Location of Impact

(Continued)

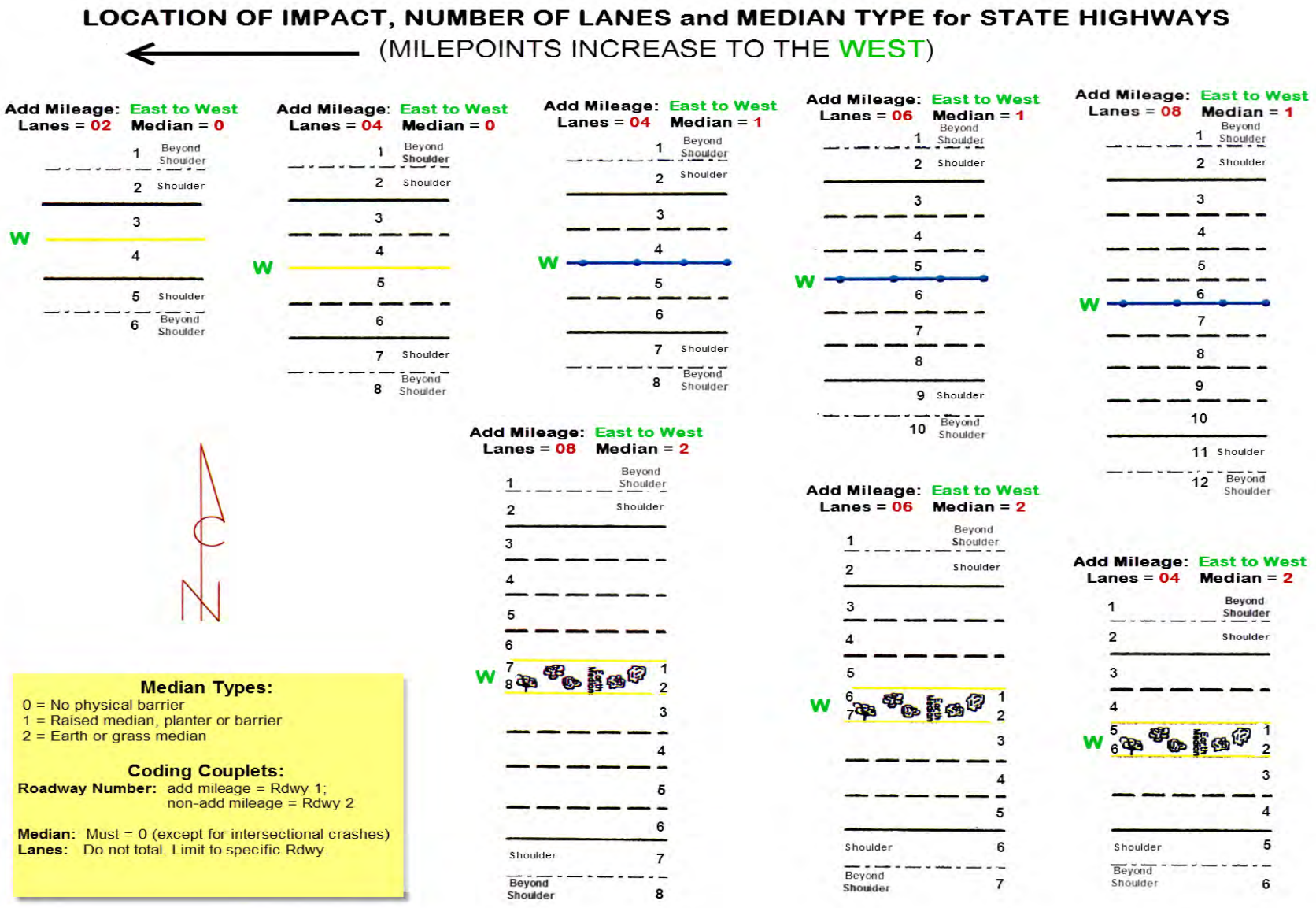


Figure 48: Location of Impact Diagrams 7

Location of Impact

(Continued)

Validations:

Rule #	Rule Message	Severity
48	*Location of Impact must be 01,02,03,04,05,06 when Road Character = 1*	*Red/Severe*
63	*When Highway Number is entered, Impact Location Code must be a Numeric value <=14*	*Red/Severe*
64	*When Highway Number is not entered but City Identifier is entered, Impact Location code must be a numeric value <=9*	*Red/Severe*
65	*When Highway Number is not entered and City Identifier is not entered, Impact Location code must be a numeric value <=7*	*Red/Severe*
134	*When not on a highway and not in a city, and not at an intersection with turning legs, Impact Location code must be <=7*	*Red/Severe*
135	*When not on a highway and not in a city, but it is at an intersection with turning legs, Impact Location Code must be <=9*	*Red/Severe*
179	*When Road Character = 1 and Number of Turning Legs >=1, and Direction does not equal 9 then Location of Impact must be 00, 01, 02, 03, 04, 05, 06 or 09*	*Red/Severe*
1024	*When Road Character = 1 (Intersectional) and Number of Turning Legs = 0 and Direction From Intersection = 9 (Center of Intersection), then Location of Impact must be 01, 02, 03, or 04.*	*Red/Severe*

Crash Type

Data Format: 1 char CRASH.CRASH_TYP_CD

Code	Description
Collision with Motor Vehicle in Transport	
A	Entering at angle – one vehicle stopped
B	Entering at angle – all others
C	From same direction – both going straight
D	From same direction – one turn, one straight
E	From same direction – one stopped
F	From same direction – all others
G	From opposite direction – both going straight
H	From opposite direction – one left turn, one straight
I	From opposite direction – one stopped
J	From opposite direction – all others
Other Crash Type	
1	Motor vehicle on other roadway
2	Parked motor vehicle
3	Pedestrian
4	Railway train
6	Pedalcyclist
7	Animal
8	Fixed object
9	Other object
&	Overturned
0	Other non-collision

Instructions:

Crash Type is a one-character field that identifies the first harmful event.

Collision with Motor Vehicle in Transport

When the first harmful event is a collision with another motor vehicle in transport, the Crash Type field also describes the *intended path of travel* of the striking vehicle, in relation to the first vehicle that was struck. The exception to this rule is **Code "1"** – Motor vehicle on other roadway.

Other Crash Types

For other crash types, this field describes first harmful events other than those involving motor vehicles in transport, with the exception of **Code "1"**.

Code "1" is used when a motor vehicle in transport leaves the travel portion of one road and enters a different roadway, having a collision with a motor vehicle in transport on the second roadway.

Code "3" (Pedestrian) is used when a vehicle strikes a pedestrian as the first harmful event.
Enter **code "3"** (Pedestrian) in this field, ***and***
Enter **code "0"** in the **Collision Type** field

Do not use code "3" for crashes where a pedestrian is struck subsequent to the first harmful event (i.e., a "sub-ped" crash). Enter Event code 005 in the pedestrian's participant record, for such cases.

Code "8" (Fixed Object) is used when the first harmful event is a stationary object that is permanently or intentionally located on or off road. When **Crash Type = Fixed Object** and the location is ***not*** off-road, one of the following Event codes must be used:

049 – Bridge girder (horizontal structure overhead)
063 – Tree branch or other vegetation overhead, etc.
064 – Wire or cable across or over the road

Crash Type

(Continued)

073 – Other bump (not speed bump), pothole or pavement irregularity
074 – Other overhanging object (highway sign, signal head, etc.); not bridge
118 – Expansion joint
127 – Rock slide or land slide

Validations:

Rule #	Rule Message	Severity
89	*When Crash Type Code = 4 (Train), one of Crash-level Event code values must be 111, 112, 113, 015 or 016*	*Red/Severe*
91	*When Crash Type Code = 8 (Fixed Object), at least one Vehicle on this crash must have a Vehicle-level Event Code value that is between 037 and 067, or between 077 and 079, or be one of the following values: 072, 073, 074, 088, 095, 096, 100, 118, 119, 120 or 127*	*Red/Severe*
132	*At least two vehicles must be coded when the Crash Type is 1, 2, A, B, C, D, E, F, G, H, I or J*	*Red/Severe*
148	*Crash Type code 'H' is not valid for crashes coded to mainline Interstate highway*	*Red/Severe*
604	*Crash type indicates Pedestrian, but no pedestrian was coded*	*Red/Severe*
605	*Crash type indicates Pedalcyclist, but no pedalcyclist was coded*	*Red/Severe*
649	*If Crash Type Code = 3 (Pedestrian) then none of the Participant Event Codes can be 005 (sub-ped)*	*Red/Severe*
708	*If a Pedestrian is struck as the first harmful event, Crash Type must = 3 and Collision Type must = 0. If Pedestrian is struck subsequent to the first harmful event, enter Event code 005 on the Crash Level and on the Participant Level for the Pedestrian record*	*Red/Severe*

Collision Type

Data Format: 1 char CRASH.COLLIS_TYP_CD

Code	Description	Code	Description
1	Angle	7	Parking Maneuver
2	Head-On	8	Non-collision
3	Rear-End	9	Fixed-Object or Other-Object
4	Sideswipe-meeting	0	Pedestrian
5	Sideswipe-overtaking	-	Backing
6	Turning Movement	&	Miscellaneous

Instructions:

Collision Type is a one-character alphanumeric code. It refers to the angle or direction of impact between vehicles based on their intended path of travel, or to the type of first impact (i.e. Non-Collision, Fixed Object, Pedestrian, etc.). Therefore, *any attempted maneuver to avoid the collision is not relevant to the coding of this field*.

Coding Priority

If a vehicle is performing more than one of the movements bulleted below, at the same time, the priority for coding Vehicle Movement is as follows:

1. Parking
2. Backing
3. Turning
4. Stopped

If a vehicle strikes a pedestrian as the first harmful event, enter **Code "0"** (Pedestrian) in this field, and enter **Code "3"** in the **Crash Type** field. (This rule does not apply to crashes in which a pedestrian is struck subsequent to the first harmful event; i.e., a "sub-ped" crash. See Event code 005 for such cases).

If Crash Type = "8" (Fixed Object) and Collision Type = "9" (Fixed Object), then Off Roadway Flag ***must*** be coded as "1" (Off Road), ***except*** for when the following Event codes are used:

049 – Bridge girder (horizontal structure overhead)
063 – Tree branch or other vegetation overhead, etc.
064 – Wire or cable across or over the road
073 – Other bump (not speed bump), pothole or pavement irregularity
074 – Other overhanging object (highway sign, signal head, etc.); not bridge
127 – Rock slide or land slide

Definitions:

Angle Collision – An angle collision results when vehicles collide while traveling on crossing paths. An angle collision involves one vehicle traveling on one roadway (i.e. North to South) and another vehicle entering from another roadway, open access, or driveway. (i.e. East to West). In other

words, a cross-movement on one street must be attempted by a vehicle traveling on the intersecting street in order for Collision Type to be classed as angle.

Backing Collision – A backing collision results when a vehicle is backing in a traffic lane and strikes another vehicle also in a traffic lane. This type will not include backing during a parking maneuver.

Fixed Object or Other Object Collision – A fixed or other object collision results when one vehicle strikes a fixed or other object on the roadway or off roadway. The **Vehicle Event** field should be coded describing what was hit.

Head-On Collision – The head-on type of collision results when the drivers of two vehicles traveling in opposite directions on parallel paths attempt to occupy the same position at the same time and find their forward movement impeded. It is not necessary for the vehicles to collide head-on; that is, for each to be struck perpendicularly to the front of the car. It is the alteration of the intended path of travel that defines the type of collision. To conform to the definition, any attempted maneuver to avoid the collision is inconsequential to the complete crash.

Miscellaneous Collision – Miscellaneous collisions include all animal crashes except animals drawing vehicles, and all crashes not classifiable under the above types. Examples include hitting a wild or domestic animal, lost load, or drive shaft fell from vehicle.

Non-collision – A non-collision crash initially involves only one vehicle, and cannot be classified as another collision. The most common non-collision crash type is an overturn (rollover). If the vehicle strikes another object, second vehicle, etc. after the initial overturn, the Collision Type is still classified as “Non-collision”.

Parking Maneuver Collision – A parking maneuver collision results when a vehicle in the act of entering or leaving a parked position is involved in a collision. A parking maneuver continues until the vehicle has completely cleared the parked position and is moving in the traffic lane. The reverse is true for a vehicle entering a parked position.

Pedestrian Collision – A pedestrian collision results when the first harmful event is any impact between a motor vehicle in traffic and a pedestrian. This excludes any crash where a pedestrian is injured after the initial vehicle impact. In this case, the first harmful event would be the collision type (i.e. rear-end collision) with the pedestrian being coded as a supplemental event to the crash.

Rear-End Collision – A rear end collision results when a vehicle traveling in the same direction or parallel on the same path as another vehicle, collides with the rear end or a second vehicle. In this type, the direction of travel was parallel but continuous.

Sideswipe-meeting Collision – A sideswipe meeting collision results when vehicles traveling in opposite directions on parallel paths collide. The side of at least one of the vehicles must be involved.

Collision Type

(Continued)

Sideswipe-overtaking Collision – A sideswipe overtaking collision results when vehicles traveling in the same direction on parallel paths collide. The side of at least one of the vehicles must be involved.

Turning movement Collision – A turning movement collision results when one or more vehicles in the act of a turning maneuver is involved in a collision with another vehicle.

Validations:

Rule #	Rule Message	Severity
70	*Combination of Crash Type Code and Collision Type Code is not valid*	*Red/Severe*
71	*Warning – combination of Crash Type Code and Collision Type Code must be confirmed – Please review*	*Yellow/Warning*

Crash Severity

Data Format: 1 char CRASH.CRASH.SVRTY_CD

Code	Description
2	Fatal crash
4	Non-fatal injury crash
5	Property damage only crash (PDO)

Instructions:

Crash Severity is classified according to the type of injury sustained in the crash. For example, if there were two injuries and one fatality, it is a fatal Crash, enter Crash Severity **code "2"**. If there were no injuries, it is a "property damage only" crash. Enter Crash Severity **code "5"**.

*Effective for 2015 crash data entry, "**Property damage only**" was discontinued as an option for "Crash Severity" for **Pedestrian** and **Pedalcycle-Involved** motor vehicle crashes.*

There is no legal requirement, nor option, for bicyclists and pedestrians to report when they're involved in a crash. In the absence of formal reporting from these participants, a decision had to be made regarding their injury severity. It was determined that, as vulnerable road users, bicyclists and pedestrians must receive at least a "possible injury" in collisions with motor vehicles. Therefore, the Crash Severity value for non-fatal crashes in which pedestrians or pedalcyclists are struck is **code "4"**.

Definitions:

Fatal Crash is a motor vehicle crash that results in fatal injuries to one or more persons. For purposes of Motor Vehicle Crash Classification, death must occur within 30 days. *(See ANSI D16.1-2007, definition 3.1.3, "Time of Classification".)* Crashes that result from deliberate intent, suicide, homicide (not negligent homicide) and non-traffic are not included. Crashes that occur on private property or in parking lots are only coded when they involve entering or exiting the roadway.

Non-Fatal Injury Crash is a motor vehicle crash that results in any injury not resulting in death.

Property Damage Only (PDO) crash is a motor vehicle crash in which there is no injury to any person, but damage occurred to a motor vehicle, other road vehicle, or to other property, including injury to domestic animals.

Validations:

Rule #	Rule Message	Severity
627	*Crash Severity indicates Fatal Crash, but no Participant was coded with a fatal injury*	*Red/Severe*
629	*Crash Severity indicates at least one Participant was injured, but no Participant was coded*	*Red/Severe*

Weather Condition

Data Format: 1 char CRASH.WEATHR_COND_CD

Code	Description
0	Unknown
1	Clear
2	Cloudy
3	Rain
4	Sleet / Freezing Rain / Hail
5	Fog
6	Snow
7	Dust
8	Smoke
9	Ash

Instructions:

Weather Condition represents the atmospheric conditions at the time of the crash.

In Oregon, we experience heavy rain, and then the sky will clear. This creates a situation where the weather conditions can be clear but the road conditions can be wet. This combination of codes will trigger a yellow warning flag in the data entry system, but in this scenario, the coding is correct.

Validations:

Rule #	Rule Message	Severity
78	*Combination of Weather Condition Code and Road Surface Condition Code is not valid*	*Red/Severe*
79	*Warning – combination of Weather Condition Code and Road Surface Condition Code must be confirmed – Please review*	*Yellow/Warning*

Road Surface Condition

Data Format: 1 char CRASH.RD_SURF_COND_CD

Code	Description
0	Unknown
1	Dry
2	Wet
3	Snow
4	Ice

Instructions:

Road Surface Condition represents the condition of the travel lanes at the time of the crash.

When a crash occurs in a tunnel, the predominant weather condition outside is coded. However, this could create a situation where the Weather Condition is coded **"rain"** and the Road Surface Condition is coded **"dry"**. This combination of codes will produce a yellow warning flag in the data entry system, but in this scenario, the coding is correct.

If there is a conflict between ice and snow, and the crash report indicates that the vehicle slid on ice, code the Road Surface Condition as Ice.

Validations:

Rule #	Rule Message	Severity
78	*Combination of Weather Condition Code and Road Surface Condition Code is not valid*	*Red/Severe*
79	*Warning – combination of Weather Condition Code and Road Surface Condition Code must be confirmed – Please review*	*Yellow/Warning*

Light Condition

Data Format: 1 char CRASH.LGT_COND_CD

Code	Description
0	Unknown
1	Daylight
2	Darkness – with street lights
3	Darkness – no street lights
4	Dawn (Twilight)
5	Dusk (Twilight)

Instructions:

Light Condition represents the amount of ambient light available at the time of the crash. The code used for Light Condition should be compatible with the time of year and hour of day, unless special circumstances exist.

Do not use Code "0" – Unknown, unless **Crash Hour** is also unknown.

If light conditions are not stated on the driver report or PAR, refer to the chart below to determine the most appropriate code.

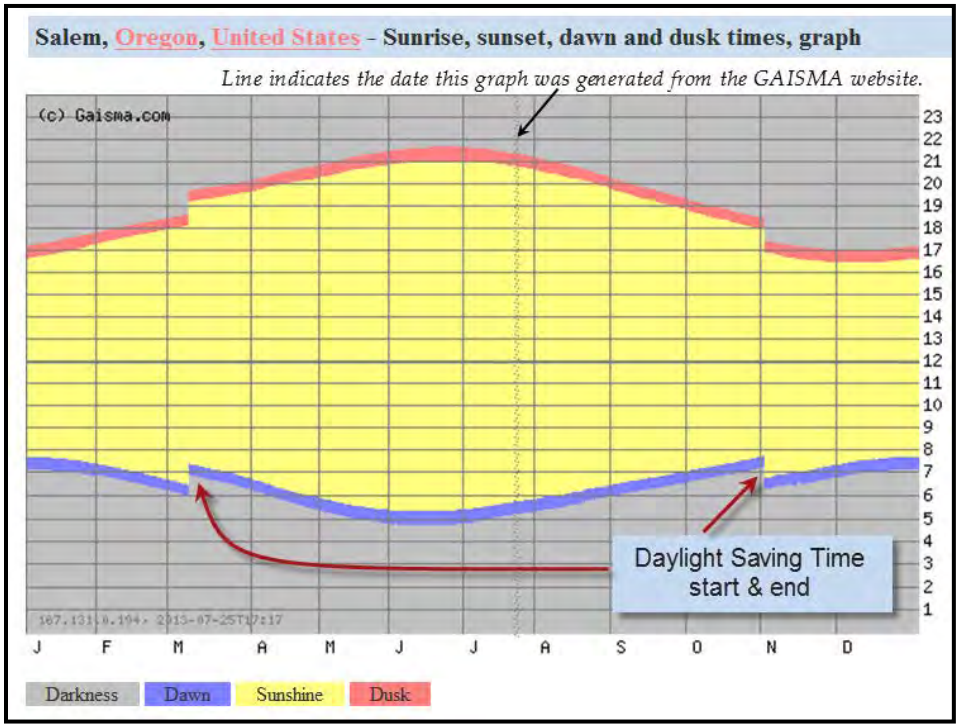


Figure 49: Seasonal Dusk/Dawn Chart

Source: GAISMA, https://www.gaisma.com, used with permission. Notes and labels added.

Validations:

Rule #	Rule Message	Severity
82	*Combination of Crash Hour, Light Condition and Crash Month not found on the cross-reference table*	*Red/Severe*
83	*Warning – please review combination of Crash Hour, Light Condition and Crash Month*	*Yellow/Warning*

Traffic Control Device

Data Format: 3 char CRASH.TRAF_CNTL_DEVICE_CD

Code	Description	Code	Description
000	No control (as stated on Police Report)	022	Left turn green arrow, lane markings or signal
001	Traffic signals	023	Right turn green arrow, lane markings or signal
002	Flashing beacon – red (stop)	024	Wigwag or flashing lights without drop arm gate
003	Flashing beacon – amber (caution)	025	Crossbuck and advance warning
004	Stop sign	026	Flashing lights with drop-arm gates
005	Slow sign	027	Supplemental overhead signal (RR crossing only)
006	Regulatory sign	028	Special rail road stop sign
007	Yield sign *(Effective 2006)*	029	Illuminated grade crossing
008	Warning sign *(Effective 2006)*	037	Metered ramps
009	Curve sign *(Effective 2006)*	038	Rumble strip *(Effective 2006)*
010	School crossing sign or Special signal	090	Left turn refuge (when refuge is involved)
011	Police officer, flagman, school patrol	091	Right turn at all times sign, lane markings, or signal
012	Bridge gate – barrier	092	Emergency signs or flares
013	Temporary barrier	093	Acceleration or deceleration lanes
014	No passing zone	094	Right turn prohibited on red after stopping
015	One way street	095	Bus stop sign and red lights
016	Channelization	099	Unknown or not defined
017	Median barrier		
018	Pilot car		
019	Special pedestrian signal		
020	Crossbuck		
021	Through green arrow or signal		

Instructions:

Traffic Control Device (TCD) is a three-digit code that indicates the predominant control present at the crash location.

More than one traffic control may be present (for example, a yield sign and a traffic signal at the same intersection), so code the control that is most pertinent to the crash.

A police officer or flagger (Code 11) controlling traffic takes precedence over other controls.

Images of some traffic control devices are depicted in the "Samples" section below. For more examples, refer to the Oregon Driver Manual.

Definitions:

Channelization: A method or device by which traffic is deliberately directed or diverted to another roadway or lane.

Flagger: A person who controls the movement of vehicular traffic through school zones, crash sites, or road construction areas using a sign, hand or flag signals. *See ORS 811.230*

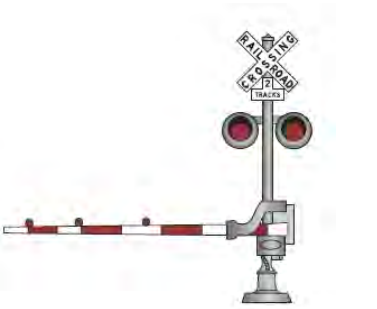
Traffic Control Device

(Continued)

Examples

Figure 50: Warning Signs

RR Crossbucks



RR Drop Arm Gate

Figure 51: Rail Crossing Controls

Overhead School Crossing Sign

Figure 52: School Zone Signs

Validations:

Rule #	Rule Message	Severity
85	*Traffic Control Device code was not found in the lookup table or is not valid as of the crash date*	*Red/Severe*

Traffic Control Device Functional

Data Format: 3 char CRASH.TRAF_CNTL_DEVICE_CD

Code	Description
0	No
1	Yes

Instructions:

Traffic Control Device Functional is a yes/no field that indicates if the Traffic Control Device coded was functional at the time of the crash.

For 2016 crash data entry, when using a default entry screen for PDO crashes, a default value of 1 is loaded. However, the field is not disabled, and the value may be changed.

Code "0" is used when the traffic control device is present but is not functioning correctly.

Code "1" is the default code. It is used when:

- A traffic control is known to be present and is known to be functioning properly
- A traffic control is known to be present but no information is available on whether the device is functioning properly
- No information exists on the presence of traffic control devices (assuming that if one exists, it is functioning correctly)

Validations:

Rule #	Rule Message	Severity
119	*Value must be 1 for Yes or 0 for No*	*Red/Severe*

Investigating Agency

Data Format: 1 char CRASH.INVSTG_AGY_CD

Code	Description
0	Driver report indicates the crash was not investigated by police
1	State Police –police report has been received
2	County Police - Police report has been received
3	City Police - Police report has been received
4	Unknown investigating agency –police report has been received
5	On Scene - Police report has not been received
6	Tribal Police
7	Other Police (includes safety and security officers)
8	***No information available on whether crash was reported by police*** (***Effective 2016)***

Instructions:

Investigating Agency indicates whether law enforcement was present at the scene; if a police crash report has been received and, if so, which agency reported the crash.

Validations:

Crash Level Events

CRASH_CAUSE_EVNT.CRASH_EVNT_1_CD
CRASH_CAUSE_EVNT.CRASH_EVNT_2_CD
CRASH_CAUSE_EVNT.CRASH_EVNT_3_CD

Data Format: 3 char, 3 char, 3 char

Code	Description
Blank	None applicable at this level
001	Occupant fell, jumped, or was ejected from moving vehicle
002	Passenger interfered with driver
003	Animal or insect in vehicle interfered with driver
004	Pedestrian indirectly involved (Not struck)
005	"Sub-Ped": pedestrian struck subsequent to collision, etc.
006	Pedal-cyclist indirectly involved (Not struck) *(Effective 2014)*
007	Hitchhiker (Soliciting a ride)
008	Passenger or non-motorist being towed or pushed on conveyance
009	Actively getting on or off stopped or parked vehicle (must have physical contact with vehicle)
010	Overturned after first harmful event
011	Vehicle being pushed
012	Vehicle towed or had been towing another vehicle
013	Vehicle forced by impact into another vehicle, cyclist or pedestrian
014	Vehicle set in motion by non-driver (Child released brakes, etc.)
015	At or on railroad right-of-way (Not light-rail)
016	At or on light-rail right-of-way
017	Train struck vehicle
018	Vehicle struck train
019	Vehicle struck railroad car on roadway
020	Jackknife: trailer or towed vehicle struck towing vehicle
021	Trailer or towed vehicle overturned
022	Trailer connection broke
023	Detached trailing object struck other vehicle, non-motorist, or object
024	Vehicle door opened into adjacent traffic lane
025	Wheel came off
026	Hood flew up
028	Lost load, load moved or shifted
029	Tire failure
030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
036	Animal-drawn vehicle
037	Culvert, open low or high manhole
038	Impact attenuator
039	Parking meter
040	Curb (Also narrow sidewalks or bridges)

Crash Level Events

(Continued)

042 Leading edge of guardrail
043 Guard rail (Not metal median barrier)
044 Median barrier (Raised or metal)
045 Retaining wall or tunnel wall
046 Bridge railing or parapet (*On bridge or approach)*
047 Bridge abutment (~~Approach ends)~~ *(Revised 2014)*
048 Bridge pillar or column -- even if struck protective guardrail first
049 Bridge girder (horizontal bridge structure overhead)
050 Traffic raised island
051 Gore
052 Pole – type unknown
053 Pole – power or telephone
054 Pole – street light only
055 Pole – traffic signal and/or ped signal only
056 Pole – sign bridge
057 Stop or yield sign
058 Other sign, including street signs
059 Hydrant
060 Delineator or marker (Reflector posts)
061 Mailbox
062 Tree, stump or shrubs
063 Tree branch or other vegetation overhead, etc.
064 Wire or cable across or over the road
065 Temporary sign or barricade in road, etc.
066 Permanent sign or barricade in/off road
068 Foreign obstruction / debris in road (Not gravel)
069 Equipment working in/off road
070 Other equipment in or off road (Including parked trailer, boat)
071 Wrecker, street sweeper, snow plow or sanding equipment
072 Rock, brick or other solid wall *(Effective 2004)*
073 Other bump *(not speed bump)* pothole or pavement irregularity (Per PAR) *(Revised 2014)*
074 Other overhead object (highway sign, signal head, etc.); not Bridge *(Effective 2004)*
075 Bridge or road cave in
076 High water
077 Snow bank
078 Low or high shoulder at pavement edge *(Revised 2014)*
079 Cut slope or ditch embankment
080 Struck by rock or other object set in motion by other vehicle, including lost loads *(Do not use with code 081)*
081 Struck by rock or other moving, falling or flying object *(Do not use with code 080)*
082 Vehicle obscured view
083 Vegetation obscured view
084 View obscured by fence, sign, phone booth, etc.

Crash Level Events

(Continued)

085	Wind gust	
086	Vehicle immersed in body of water	
087	Fire or explosion	
089	Crash related to another separate crash	
090	Two-way traffic on divided roadway all routed to one side	
091	Building, other structure	*(Effective 2004)*
092	Other (phantom) non-contact vehicle (On PAR or witness statement)	
093	Cell phone (on PAR or report submitted by driver using phone)	
094	Police report indicates teenage driver of an involved vehicle was in violation of graduated license program	
095	Guy wire	
096	Berm (Earthen or gravel mound)	
097	Gravel in roadway	
098	Abrupt edge	
099	Cell phone use witnessed by other participant	
100	Fixed object, unknown type	
101	Non-Fixed object, other or unknown type	
102	Texting	*(Effective 2014)*
103	Work Zone Worker	*(Effective 2014)*
104	Passenger riding on vehicle exterior	
105	Passenger riding on pedalcycle	
106	Pedestrian in non-motorized wheelchair	
107	Pedestrian in motorized wheelchair	
108	Law Enforcement / Police Officer	*(Effective 2014)*
109	“Sub-Bike”: pedal-cyclist injured subsequent to collision, etc.	*(Effective 2014)*
110	Non-motorist struck vehicle	
111	Street car or trolley (on rails or overhead wire system) struck vehicle	
112	Vehicle struck street car / trolley (On rails or overhead wire system)	
113	At or on street car or trolley right-of-way	
114	Vehicle struck railroad equipment on tracks (Not train)	
115	Distracted by navigation system or GPS device	*(Effective 2014)*
116	Distracted by other electronic device	*(Effective 2014)*
117	Rail crossing drop arm gate	*(Effective 2014)*
118*	Expansion joint	*(Effective 2014)*
119*	Jersey barrier	*(Effective 2014)*
120	Wire or cable median barrier	
121	Fence	*(Effective 2014)*
123	Loose object in vehicle struck occupant	*(Effective 2014)*
124	Sliding or swerving due to wet, icy, slippery or loose surface	
125	Shoulder gave way	
126	Rocks / boulder (Not gravel; not rock slide)	*(Effective 2014)*
127	Rock slide or land slide	*(Effective 2014)*

Crash Level Events

(Continued)

128	Curve present at crash location *(Do not use with code 130)*	*(Effective 2014)*
129	Vertical grade, hill present at crash location *(Do not use with code 131)*	*(Effective 2014)*
130	View obscured by curve *(Do not use with code 128)*	*(Effective 2014)*
131	View obscured by vertical grade, hill *(Do not use with code 129)*	*(Effective 2014)*
132	View obscured by vehicle window conditions	*(Effective 2014)*
133	View obscured by water spray	*(Effective 2014)*
134	**Torrential rain (Exceptionally heavy rain)**	**(Effective 2016)**

Instructions:

Event is a three-digit code that describes an incident or situation contributing to or involved in the crash. Events generally represent occurrences of injury or damage to a person or property, but they may also identify other crash factors.

On the Crash Level, enter the Events that relate to the overall crash, in the order of occurrence. Up to three Event codes are allowed. If more than three events occur, code the three most significant events in relation to the crash.

Code 103 – Work Zone Worker may be pedestrians, motor vehicle occupants, or "other non-motorist" if using equipment inside barriers or off road. Code the Participant Type field accordingly, and use code 103 in the Participant Event field as well, to enable reporting of Work Zone Worker attributes (i.e. gender, age, non-motorist location, etc.)

Events specific to Vehicles and Participants are specified on those levels as well, for reporting purposes.

Definitions:

Bridge Abutment: A retaining wall supporting the ends of a bridge. (*See image on next page)*

Bridge Girder: A large beam beneath the deck of the bridge: or other horizontal structure that supports vertical loads by resisting bending. *(See image on next page)*

Bridge Pillar / Column: A vertical structure that resists compression and supports the ends of a bridge between abutments. *(See image on next page)*

Bridge Railing or Parapet: A protective wall or fence built at the outermost edge of the bridge roadway or sidewalk portion of a bridge to protect pedestrians and vehicles. *(See image on next page)*

Impact attenuator: A device used to divert and decelerate impacts of vehicles from striking more rigid objects, in order to reduce the crash severity. Examples include barrels filled with water or sand and plastic collapsible structures. *(See Bridge Components image on next page)*

(Continued)

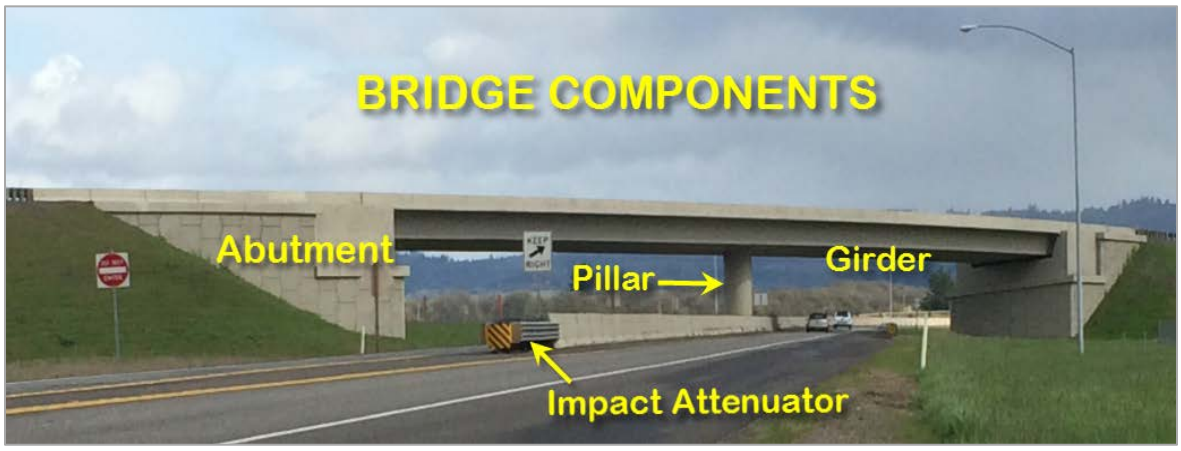


Figure 53: Bridge Components

Expansion Joint: Engineered "pre-planned cracks" in concrete slabs that allow for the structure to expand when it is heated during the day, and to contract when it is cold at night or in the winter. They permit independent vertical and horizontal movement between adjoining parts of the structure and help minimize cracking.

Gore: An area inside the triangular space that divides a ramp exit or entrance from the mainline roadway. Its purpose is to provide recovery room for a vehicle. Impact attenuating devices are usually located inside the gore area.

Guy Wire: A stabilizing brace made of cable, wire or rope that is used to secure or steady a sign, pole or structure.

Crash Level Events

(Continued)

Validations:

Rule #	Rule Message	Severity
88	*Value was not found in the EVNT table or is not valid for use as of the crash date*	*Red/Severe*
89	*When Crash Type Code = 4 (Train), one of Crash Level Event code values must be 015 or 016*	*Red/Severe*
709	*If CRASH level Cause code = 099, there must be at least one driver, Bicyclist (or other Non-Motorist) with Partic Evnt = 093*	*Red/Severe*
710	*If CRASH level CAUSE code = 099, there must be at least one driver, Bicyclist (or other Non-Motorist) with Partic Evnt = 099*	*Red/Severe*

Crash Level Events by Category

Event codes grouped by category and some Events apply to more than one category.

Animal

030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
036	Animal-drawn vehicle

Avoiding

These codes may be used in conjunction with Vehicle Action code 007 (successful avoidance).

004	Pedestrian indirectly involved (Not struck)
006	Pedal-cyclist indirectly involved (Not struck)
007	Hitchhiker (Soliciting a ride)
030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
036	Animal-drawn vehicle
068	Foreign obstruction / debris in road (Not gravel)
073	Other bump (not speed bump), pothole or pavement irregularity (Per PAR)
092	Other (phantom) non-contact vehicle (On PAR or report)

Distractions

002	Passenger interfered with driver
003	Animal or insect in vehicle interfered with driver
004	Pedestrian indirectly involved (Pedestrian not struck)
006	Pedal-cyclist indirectly involved (Pedal-cyclist not struck)
007	Hitchhiker (Soliciting a ride)
030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
092	Other (phantom) non-contact vehicle (On PAR or report)
093	Cell phone (On PAR or report submitted by using phone)
099	Cell phone use witnessed by other participant

Crash Level Events by Category

(Continued)

102	Texting
115	Distracted by navigation system or GPS device
116	Distracted by other electronic device

Fixed Object

037	Culvert, open low or high manhole
038*	Impact attenuator
039	Parking meter
040	Curb (Also narrow sidewalks or bridges)
042	Leading edge of guardrail
043	Guard rail (Not metal median barrier)
044	Median barrier (Raised or metal)
045	Retaining wall or tunnel wall
046	Bridge railing or parapet (On bridge or approach)
047	Bridge abutment
048	Bridge pillar or column (Even if struck protective guard rail first)
049*	Bridge girder (Horizontal bridge structure overhead)
050	Traffic raised island
052	Pole – type unknown
053	Pole – power or telephone
054	Pole – Street light only
055	Pole – Traffic signal and/or ped signal only
056	Pole – Sign bridge
057	Stop or yield sign
058	Other sign, including street signs
059	Hydrant
060	Delineator or marker (Reflector posts)
061	Mailbox
062	Tree, stump or shrubs
063	Tree branch or other vegetation overhead, etc.
064	Wire or cable across or over the road
066	Permanent sign or barricade in/off road
072	Rock, brick or other solid wall
073	Other bump (not speed bump), pothole or pavement irregularity (Per PAR)
074	Other overhead object (highway sign, signal head, etc.); not bridge
075	Bridge or road cave in
077	Snow bank
078	Low or high shoulder at pavement edge
079	Cut slope or ditch embankment
091	Building, other structure
095	Guy wire
096	Berm (Earthen or gravel mound)
098	Abrupt edge

Crash Level Events by Category

(Continued)

100 Fixed object, unknown type
118 Expansion joint
119 Jersey Barrier
120 Wire or cable median barrier
121 Fence
126 Rocks / boulder (Not gravel; not rock slide)
127 Rock slide or land slide

Miscellaneous

010 Overturned after first harmful event
011 Vehicle being pushed
012 Vehicle towed or had been towing another vehicle
013 Vehicle forced by impact into another vehicle, cyclist or pedestrian
051* Gore
076 High water
085 Wind gust
086 Vehicle immersed in body of water
087 Fire or Explosion
089 Crash related to another separate crash
090 Two-way traffic on divided roadway all routed to one side
094 Police report indicates teenage driver of an involved vehicle was in violation of graduated license program
124 Sliding or swerving due to wet, icy, slippery or loose surface
125 Shoulder gave way
128 Curve present at crash location
129 Vertical grade, hill present at crash location
134 Torrential rain (Exceptionally heavy rain) (Effective 2016)

Non Fixed Object

065 Temporary sign or barricade in road, etc.
068 Foreign obstruction / debris in road (Not gravel)
069 Equipment working in/off road
070 Other equipment in or off road (Including parked trailer, boat)
080 Struck by rock or other object set in motion by other vehicle, including lost loads. *(Do not use with code 081)*
081 Struck by rock or other moving, falling or flying object. *(Do not use with code 080)*
097 Gravel in roadway
101 Non-Fixed object, other or unknown type
117 Rail crossing drop arm gate

Non-Motorist

004 Pedestrian indirectly involved (Pedestrian not struck)
005 "Sub-Ped": pedestrian injured subsequent to collision

Crash Level Events by Category

(Continued)

006 Pedal-cyclist indirectly involved (Pedal-cyclist not struck)
007 Hitchhiker (Soliciting a ride)
008 Passenger or non-motorist being towed or pushed on conveyance
011 Vehicle being pushed
024 Vehicle door opened into adjacent traffic lane
036 Animal-drawn vehicle
103 Work Zone Worker
105 Passenger riding on pedalcycle
106 Pedestrian in non-motorized wheelchair
107 Pedestrian in motorized wheelchair
108 Law Enforcement / Police Officer
109 "Sub-Bike": pedal-cyclist injured subsequent to collision
110 Non-motorist struck vehicle

Occupant

001 Occupant fell, jumped, or was ejected from moving vehicle
002 Passenger interfered with driver
008 Passenger or non-motorist being towed or pushed on conveyance
009 Getting on or off stopped or parked vehicle (has physical contact with vehicle)
014 Vehicle set in motion by non-driver (Child released brakes, etc.)
094 Police report indicates teenage driver of an involved vehicle was in violation of graduated license program
104 Passenger riding on vehicle exterior
108 Law Enforcement / Police Officer
123 Loose object in vehicle struck occupant

Rail Related

015 At or on railroad right-of-way (Not light-rail)
016 At or on light-rail right-of-way
017 Train struck vehicle
018 Vehicle struck train
019 Vehicle struck railroad car on roadway
111 Street car or trolley (On rails or overhead wires) struck vehicle
112 Vehicle struck street car / trolley (On rails or overhead wires)
113 At or on street car or trolley right-of-way
114 Vehicle struck railroad equipment on tracks (Not train)
117 Rail Crossing Drop Arm Gate

View Obscured

082 Vehicle obscured view
083 Vegetation obscured view
084 View obscured by fence, sign, phone booth, etc.

Crash Level Events by Category

(Continued)

130	View obscured by curve	
131	View obscured by vertical grade, hill	
132	View obscured by vehicle window conditions	
133	View obscured by water spray	
134	**Torrential rain (exceptionally heavy rain)**	***(Effective 2016)***

Vehicle Related

010	Overturned after first harmful event	
011	Vehicle being pushed	
012	Vehicle towed or had been towing another vehicle	
013	Vehicle forced by impact into another vehicle, cyclist or pedestrian	
014	Vehicle set in motion by non-driver (Child released brakes, etc.)	
020	Jackknife: trailer or towed vehicle struck towing vehicle	
021	Trailer or towed vehicle overturned	
022	Trailer connection broke	
023	Detached trailing object struck other vehicle, non-motorist, or object	(Effective 2004)
024	Vehicle door opened into adjacent traffic lane	
025	Wheel came off	
026	Hood flew up	
028	Lost load, load moved or shifted	
029	Tire failure	
071	Wrecker, street sweeper, snow plow or sanding equipment	

Crash Level Cause

CRASH_CAUSE_EVNT.CRASH_CAUSE_1_CD
CRASH_CAUSE_EVNT.CRASH_CAUSE_2_CD
CRASH_CAUSE_EVNT.CRASH_CAUSE_3_CD

Data Format: 2 char, 2 char, 2 char

Code	Description	
00	No cause associated at this level	
01	Speed too fast for conditions (Not exceeding limit)	
02	Did not yield right-of-way	
03	Passed stop sign or red flasher	
04	Disregarded traffic signal	*(Revised 2014)*
05	Drove left of center on two-way road; straddling the center line	
06	Improper overtaking	
07	Followed too closely	
08	Made improper turn	
10*	Other improper driving	
11	Mechanical defect – other than represented by codes 21, 22, or 25	
12*	Other (Not improper driving)	
13	Improper change of traffic lanes	
14	Disregarded other traffic control device	
15	Wrong way on one-way roadway (Also when roadway has a solid or earth median and vehicle is traveling on wrong side)	
16	Driver drowsy / fatigued / sleepy	
17	Physical Illness	*(Effective 2014)*
18	Non-Motorist illegally in roadway	
19	Not visible: dark / non-reflective clothing	
20	Vehicle improperly parked	
21	Defective steering mechanism	
22	Inadequate or no brakes	
24	Vehicle lost load or load shifted	
25	Tire failure	
26	Phantom / non-contact vehicle	
27	Inattention	
28	Non-Motorist Inattention	*(Effective 2014)*
29	Failed to avoid vehicle ahead	*(Effective 2014)*
30	Driving in excess of posted speed	
31	Speed Racing (Per PAR or self-reported)	
32	Careless Driving (Per PAR or self-reported)	
33	Reckless Driving (Per PAR or self-reported)	
34	Aggressive Driving (Per PAR)	
35	Road Rage (Per PAR)	
40	View Obscured	*(Effective 2014)*
50	Improper use of median or shoulder	*(Effective 2014)*

Crash Level Cause

(Continued)

Instructions:

Cause is a two-digit code that represents the circumstance(s) most responsible for the occurrence of the crash. Enter the codes that explain why the crash happened, in the order of predominance.

A Cause field is also available on the Vehicle and Participant Levels, to specify the vehicle or participant that precipitated the crash, when applicable.

Each crash must have at least one Cause code entered on the Crash Level, but up to three are allowed.

Code "5" is used when the vehicle is straddling the center line or driving on wrong side of an undivided two way road.

Code "10" is used when a driver error was a factor in the crash, but no other cause code applies.

Code "12" is used *when improper driving was not a factor* in the crash, and no other Cause code applies. For example:

- Deer jumps out in front of vehicle, leaving driver no time to react
- Passenger, animal or insect. etc., interfered with driver

Code "15" is used when the vehicle is traveling on the wrong side of a divided roadway or traveling the wrong direction on a one way road.

Code "34" is used only when the PAR states that the crash involved aggressive driving. *It must not be used based solely on witness statements.*

Code "35" is used when **collateral damage** results from an act of road rage. *Do not use this code when the collision is a road rage incident,* which falls under Deliberate Intent. Road rage incidents are excluded from the Crash Data System.

Do not use codes 34 or 35 without approval from the Code Team Leader.

Aggressive Driving vs. Road Rage:

Aggressive driving differs from road rage, which falls under "Deliberate Intent". True "road rage" crashes are excluded from the Crash Data System. **Unintentional** crashes related to road rage *are* entered into CDS, and identified at the Crash level using Cause code "34".

Aggressive driving is defined by NHTSA as *"…when an individual commits a combination of moving traffic offenses so as to endanger other persons or property." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/Driving-Safety/Aggressive-Driving)*

Example: Cutting other vehicles off, or deliberately preventing someone from merging ***but not intending to collide with the other vehicle.***

Aggressive driving is a *traffic* offense, whereas Road Rage is a *criminal* offense.

Crash Level Cause

(Continued)

Road rage is defined as *"an assault with a motor vehicle or other dangerous weapon by the operator or passenger(s) of another motor vehicle, or an assault precipitated by an incident that occurred on a roadway." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/people/injury/research/aggressionwisc/chapter_1.htm)*

In order for an incident to be defined as **road rage**, there must be **"willful and wanton disregard for the safety of others."** In other words, road rage means that someone deliberately tried to harm you as a result of something that happened while you were driving your car.

Examples of Unintentional Crashes Resulting from "Road Rage"

(Enter these types of cases into the Crash Data System)

1. PAR describes a driver flashing lights and/or sounding the horn excessively, causing distraction to another driver, resulting in that other driver colliding with a vehicle or fixed object
2. A motorist fleeing from a vehicle driven by an angry spouse crashes unintentionally into a third vehicle

Examples of "Road Rage" Crashes

(Do not enter these types of cases into the Crash Data System.)

1. Driver or passenger throwing projectiles from a moving vehicle with the intent of damaging other vehicles, pedestrians or pedal-cyclists
2. Passenger or driver shooting at vehicles, pedestrians or pedal-cyclists
3. Intentionally causing a collision between vehicles
4. Exiting the car intending to start confrontations, including striking other vehicles with an object
5. Deliberately running other vehicle off the roadway
6. Deliberately striking a vehicle, pedestrian, pedal-cycle or object

Validations:

Rule #	Rule Message	Severity
92	*Value was not found in the lookup table or is not valid for use as of the crash date*	*Red/Severe*
703-707	*If CRASH level CAUSE code = "[code field value]", there must be at least one Driver, Bicyclist, or Bicyclist Towing with CAUSE = "[code field value]"*	*Red/Severe*

Crash Level Cause by Category

Cause codes grouped by category. Some Causes apply to more than one category.

Behavior

02	Did not yield right-of-way
03	Passed stop sign or red flasher
04	Disregarded traffic signal
05	Drove left of center on two-way road
06	Improper overtaking
07	Followed too closely
08	Made improper turn
13	Improper change of traffic lanes
14	Disregarded other traffic control device
15	Wrong way on one-way roadway. (Also when roadway has a solid or earth median and vehicle is deliberately traveling on wrong side)
16	Driver drowsy / fatigued / sleepy
17	Physical Illness
18	Non-Motorist illegally in roadway
19	Not visible: dark / non-reflective clothing
27	Inattention
28	Non-Motorist Inattention
29	Failed to avoid vehicle ahead
32	Careless Driving (Per PAR or self-reported)
33	Reckless Driving (Per PAR or self-reported)
34*	Aggressive Driving (Per PAR) *(Requires approval from the Code Team Leader)*
35*	Road Rage (Per PAR) *(Requires approval from the Code Team Leader)*
50	Improper use of median or shoulder

Miscellaneous

00	No cause associated at this level
10	Other improper driving
12	Other (Not improper driving)
26	Phantom / non-contact vehicle
40	View Obscured

Speed

01	Speed too fast for conditions (Not exceeding limit)
30	Driving in excess of posted speed
31	Speed Racing (Per PAR or self-reported)

Vehicle Related

11	Mechanical defect
20	Vehicle improperly parked
21	Defective steering mechanism
22	Inadequate or no brakes
24	Vehicle lost load or load shifted
25	Tire failure

School Zone

Data Format: 1 char CRASH.SCHL_ZONE_IND

Code	Description
Blank	Not reported
0	No
1	Yes
9	Unknown

Instructions:

School Zone is a one-digit code that indicates the crash occurred:

- On a road adjacent to school grounds and that is marked by signs indicating a school zone with words, symbols, or a combination of words and symbols that give notice to the presence of the school zone
- In a crosswalk that is not adjacent to school grounds but that is marked by such signs

This definition of "School Zone" is found in ORS 801.462.

Code "0" is used when information clearly indicates that the crash did not occur inside a designated school zone.

Code "1" is used when information clearly indicates that a crash occurred inside a school zone.

Code "9" is used when information indicates that a designated school zone exists near the area of the crash, but it is unknown if the crash occurred within the designated school zone boundaries.

Leave this field blank if no information is available on the existence of a designated school zone.

See "Traffic Control Device" for images of school zone signs.

Validations:

Rule #	Rule Message	Severity
172	*School Zone cannot be 1 for Interstate highways (Functional Class 01 or 11)*	*Red/Severe*

Work Zone

Data Format: 1 char CRASH.WRK_ZONE_IND

Code	Description
Blank	Not reported
0	No
1	Yes
9	Unknown

Instructions:

Work Zone is a one-digit code that indicates if the crash occurred in a work zone.

A work zone is an area identified by advance warning where road construction, repair, maintenance, or utility work is being done on or adjacent to a highway, regardless of whether or not workers are present. For CDS, road construction, repair, maintenance or utility work includes, but is not limited to, the setting up and dismantling of cones, barriers or advance warning systems.

If no information is available on the existence of a work zone, leave this field blank.

Code "0" is used when information from the driver or police report clearly indicates that no work zone was present.

Code "1" is used when information on the driver or police report clearly indicates that a crash occurred inside a work zone, or where road construction, maintenance, utility work, cones or flaggers are present.

Code "9" is used when information indicates that a work zone exists near the area of the crash, but it is unknown if the crash occurred within the work zone boundaries.

Validations:

Section II: VEHICLE LEVEL

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Vehicle Number

Data Format: tinyint VHCL.VHCL_CODED_SEQ_NO

Code	Description
01-99	Assigned sequentially for each vehicle.

Instructions:

Vehicle Number is a two-digit numeric field. It is a sequential number assigned by the Crash Data Entry System for each vehicle involved in the crash. The code is system-generated, but may be changed by the Crash Data Technician, if needed, to modify the entry order of vehicle records.

Always code the striking vehicle first. The term "striking vehicle" refers to the vehicle that initially impacted a second vehicle, an object, pedestrian or pedal-cyclist.

The striking vehicle is not necessarily the vehicle that was in error.

Do not generate a vehicle record for pedestrians, pedal-cyclists, or other non-motorists.

Validations:

Vehicle Ownership

Data Format: 1 char VHCL.VHCL_OWNSHP_CD

Code	Description	
0	Not collected for PDO Crashes	*(Default value for PDO crashes effective 2016)**
1	Private	
2	U.S. (federal) Government	
3	Public (city, county, state)	
4	Rental vehicle	
5	Stolen vehicle	
9	Unknown ownership	

Instructions:

Vehicle Ownership is a one-digit code. Ownership information is obtained from the driver report and/or PAR.

Code "1" includes vehicles privately owned motor vehicles, including corporate vehicles used for business purposes not otherwise described above.

Code "5" is used for stolen vehicles. This code takes precedence over all other ownership codes.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "0" in PDO Default entry screens.*

Validations:

Special Use

Data Format: 1 char VHCL.VHCL_USE_CD

Code	Description	
0	No special use	*(Default value for PDO crashes effective 2016)**
1	Police	
2	Fire	
3	Ambulance	
4	Hearse	
5	Taxi	
6	Logging	
7	Farm (“F” Plate)	
8	Military	
9	Unknown use	

Instructions:

Special Use is a one-digit code indicating that the vehicle is being used for a purpose that may not be readily apparent from its design. The vehicle may or may not have special markings to indicate its usage type.

Police and Fire vehicles are always considered to be in special use, though they may not be in emergency use at the time of the crash.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to “0” in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
306	*Value was not found in lookup table or is not valid as of the crash date*	*Red/Severe*
307	*Combination of Vehicle Type and Vehicle Use not valid in the cross-reference table*	*Red/Severe*

Vehicle Type

Data Format: 2 char VHCL.VHCL_TYP_CD

Code	Description
01	Passenger car, pickup, van, light delivery, and custom van
02	Truck tractor with no trailers (Bobtail)
03	Farm tractor or self-propelled farm equipment (Not truck)
04	Truck tractor with trailer/mobile home in tow
05	Truck with non-detachable bed: *Panel truck, self-propelled crane, tow truck, fire truck, refuse packer, leach packer, log grappler, etc.*
06	Moped, mini-bike, motor scooter (seated), or motorized bicycle
07	School bus, or van used to transport students
08	Other bus *For flexi-bus or articulated bus, code "trailer"*
09	Motorcycle, dirt bike. *For side car, code "trailer"*
10	Other vehicle type: *Forklift, backhoe, mailster, go-cart, golf cart, lawnmower, snowplow, street cleaner, road grader, ice cream scooter, meter maid scooter*
11	Motorhome
12	Motorized street car or trolley, not using rails or wires
13	ATV
14	Motorized scooter (Standing)
15	Snowmobile
99	Unknown vehicle type

Instructions:

Vehicle Type is a two-digit code that identifies the general class of vehicle involved in a crash.

Code "02" is used for truck tractors designed to pull a trailer, but with no trailer attached. This type of vehicle is commonly called a "Bobtail".

Code "03" is used for farm tractors, F-plated trucks and self-propelled farm machinery. Do not use this code for motor carrier trucks.

Code "04" is used for truck tractors that have one or more trailers attached, or may be transporting a mobile home (not to be confused with Code 11, Motorhome).

Code "07" applies to standard school buses as well as vans used to transport students.

Code "08" is used for city, transit, and other types of buses. For articulated (flexible) buses, enter the number of trailing flexible sections in the Number of Trailers field.

Vehicle Type

(Continued)

Code "09" is used for motorcycles and dirt bikes if a sidecar and/or other trailing object is attached to the motorcycle, enter the appropriate value in the Number of Trailers field.

Code "10" is used for all other types of road vehicles.

Code "13" is used for ATVs. ATV crashes are only entered into ODOT's Crash Data System when the incident occurs on the traveled portion of a public roadway. Off-road ATV crashes are not entered into the system. License and endorsement requirements are not considered when coding this type of vehicle. *(ATVs were included with motorcycles under Code 09, prior to 2007.)*

Code "14" is used for standing-type scooters, such as Segways.

Definitions:

Articulated Bus: A flexible bus comprised of two or more rigid sections that are linked by a pivoting joint. Also called "bendy bus", "accordion bus" or "flexi-bus".

Farm Tractor: Motor vehicles designed and used primarily in agricultural operations for drawing or operating other farm machines, equipment and implements of husbandry.

Validations:

Rule #	Rule Message	Severity
302	*Value was not found in lookup table or is not valid as of the crash date*	*Red/Severe*
307	*Combination of Vehicle Type and Vehicle Use not valid in the cross-reference table*	*Red/Severe*

Emergency Use

Data Format: bit VHCL.EMRGCY_VHCL_USE_FLG

Code	Description	
0	No	*(Default value for PDO crashes effective 2016*)*
1	Yes	

Instructions:

Emergency Use is a **"yes/no"** field that indicates whether the vehicle was being used as an emergency vehicle at the time of the crash. This code may be applied to any type of vehicle.

Code "0" is used for vehicles that are not being used in an emergency. This includes police, fire, and ambulance vehicles not running with lights or sirens.

Code "1" is used for any vehicles that are being used in an emergency. This includes police, fire, and ambulance vehicles running with lights and / or sirens.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "0" in PDO Default entry screens.*

Validations:

Number of Trailers

Data Format: tinyint VHCL.TRLR_QTY

Code	Description
0	No trailers attached
1	One trailing unit
2	Two trailing units
3	Three or more trailing units
8	Trailing, but number of units unknown
9	Unknown *(Default value for PDO crashes effective 2016)**

Instructions:

Number of Trailers is a one-digit code that indicates whether any trailers were attached to a vehicle, and if so, how many.

Code "0" is used when it is known that there are no trailers attached or that no information is given indicating the presence of trailers for this vehicle. (Use this code as a default).

Code "9" is used when conflicting information exists regarding trailing units for this vehicle.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to '9' in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
339-354	*Warning: trailer quantity unusual for Vehicle Type. Please confirm.*	*Yellow/Warning*

Vehicle Movement

Data Format: 1 char VHCL.MVMNT_CD

Code	Description	Code	Description
0	Unknown	5	Backing
1	Straight ahead	6	Stopped in traffic
2	Turning right	7	Parked - properly
3	Turning left	8	Parked - improperly
4	Making a U-turn	9	Parking maneuver

Instructions:

Vehicle Movement is a one-digit code that represents the intended movement of the vehicle at the time of the crash.

Curves in the roadway do not influence how Movement is coded. If a vehicle is traveling straight ahead and encounters a curve, Movement Code = 1.

If **Vehicle Movement = 6** (stopped in traffic), then **Vehicle Action** must be one of the following, and *must not* be 021 (car ran away – no driver).

- 011 – Stopped in traffic not waiting to make a left turn
- 012 – Stopped because of left turn signal; waiting etc.
- 013 – Stopped while executing a turn
- 022 – Struck, or was struck by, vehicle, pedal-cyclist, or pedestrian in prior collision before crash stabilized
- 023 – Vehicle stalled

*If the **Vehicle Movement** field is coded 7 (Parked – properly), then the **Participant Type** field for **all** injured occupants of that vehicle **must** be coded as 8 (occupant of a parked motor vehicle).

Coding Priority

If a vehicle is performing more than one of the movements listed below, at the same time, the priority for coding Vehicle Movement is as follows:

1. Parking
2. Backing
3. Turning
4. Stopped

Validations:

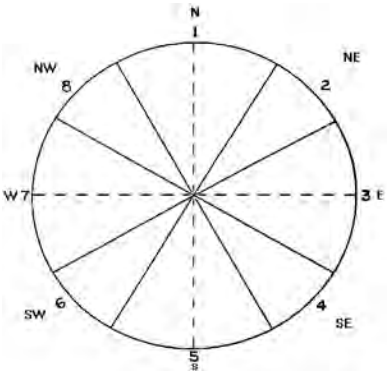
Rule #	Rule Message	Severity
316	*Discrepancy exists between Movement and From or To Direction*	*Red/Severe*
319	*If Vehicle Movement Code = 6 then Vehicle Action Code must = 011, 012, 013, 022 or 023*	*Red/Severe*
320	*If Vehicle Movement Code = 7 or 8 then Vehicle Action Code must = 008, 009, 021, 023 or 032*	*Red/Severe*
321	*If Vehicle Movement Code = 9 then Vehicle Action Code must = 008 or 009*	*Red/Severe*

Direction of Travel From / To

VHCL.CMPSS_DIR_FROM_CD
VHCL.CMPSS_DIR_TO_CD

Data Format: 1 char, 1 char

Code	Description
0	Unknown
1	North
2	Northeast
3	East
4	Southeast
5	South
6	Southwest
7	West
8	Northwest



Instructions:

Direction of Travel is represented by two, 1-digit fields ("Direction From" and "Direction To"). Used together, these fields indicate the vehicle's intended direction of travel. The first field indicates the direction the vehicle came from. The second field indicates the direction the vehicle was heading.

Curves in the roadway do not influence how Direction of Travel is coded. If a vehicle is traveling straight ahead and encounters a curve, its Direction of Travel will reflect straight movement.

Inside City Limits

Use the illustration above (consistent with the transparency handout) to assign direction of travel.

The street numbers and the direction the streets run can be found in the Set-up Books. The "direction of travel" for city streets may be 1 through 8. The directions set up in the street intersection setup books are what should be coded.

If the directions or any other information in the Set-up Book is incorrect, the Crash Data Technician should correct the record using the set-up procedure. Instructions on the set-up procedure will be found in the appendix.

Outside City Limits

When coding crashes that occurred on County Roads, use only codes that represent cardinal directions (N, S, E, W).

At intersections, when one county road runs in a cardinal direction and the other does not; code the non-cardinal road to the opposite cardinal direction. When this is the circumstance on a highway intersection outside city limits, apply the same rule.

At intersections, when both roadways have non-cardinal directions, code them to the nearest cardinal direction.

Direction of Travel From / To

(Continued)

Multnomah and **Washington Counties** are the exception to this rule for county roads. For these counties, follow the rule for" Direction of Travel Inside City Limits".

Validations:

Rule #	Rule Message	Severity
313	*Code was not found in lookup table or is not valid as of the crash date*	*Red/Severe*
316	*Discrepancy exists between Movement and From or To Direction*	*Red/Severe*

Vehicle Level Action

Data Format: 3 char VHCL.ACTN_CD

Code	Description	
000	No action or non-warranted	
001	Skidded	
003	Overhanging load struck another vehicle, etc.	
006	Slowed down	
007*	Avoiding maneuver (Successful)	
008	Parallel parking or parked	
009	Angle parking or parked	
011*	Stopped in traffic not waiting to make a left turn	
012*	Stopped because of left turn signal or waiting, etc.	
013*	Stopped while executing a turn	
014	**Emergency vehicle legally parked in the roadway**	***(Effective 2016)***
015	Proceeded after stopping for a stop sign / flashing red	
016	Turned on red after stopping	
018	Entering street or highway from alley or driveway	
019	Entering alley or driveway from street or highway	
020	Before entering roadway, struck pedestrian, etc. on sidewalk or shoulder	
021	Car ran away – no driver	
022	Struck, or was struck by, vehicle or pedestrian involved in prior collision before the crash stabilized	
023*	Vehicle stalled or disabled	
029*	Vehicle crossed, plunged over, or through median barrier	
031	Passing situation	
032	Vehicle parked beyond curb or shoulder	
033*	Vehicle crossed earth or grass median	
051	Entering / starting in traffic lane from off-road	
052	Merging	*(Effective 2014)*
088	Other action	

Instructions:

Vehicle Action is a three-digit code that reflects the driver's handling of the vehicle prior to the first harmful event, or in the absence of a driver, actions that occurred in relation to this vehicle. This field is not coded based on violations of law or driver error.

If Vehicle Movement is 6 – Stopped in traffic, then Vehicle Action ***must*** be one of the following:

- 011 – Stopped in traffic not waiting to make a left turn
- 012 – Stopped because of left turn signal; waiting etc.
- 013 – Stopped while executing a turn
- 022 – Struck, or was struck by, vehicle, pedal-cyclist, or pedestrian in prior collision before crash stabilized
- 023 – Vehicle stalled

Vehicle Level Action

(Continued)

Use **code "007"** (Avoiding Maneuver) only when the avoidance maneuver was successful.

Code "021" (Car ran away – no driver) is used for driverless vehicles that are set in motion. When using this code, **do not** use Vehicle Movement code "6" (Stopped in traffic).

When using Vehicle Level Action Code "029" or "033", check the Digital Video Log (DVL) to verify that the correct median type has been coded.

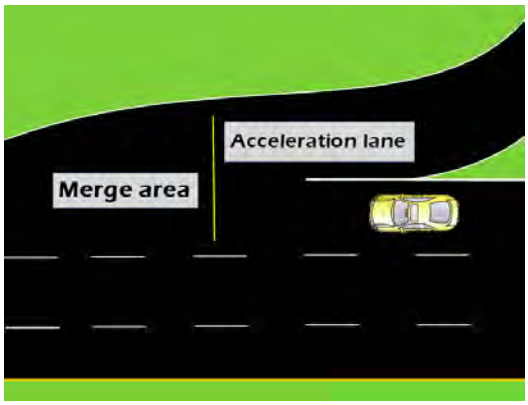


Figure 54: Code 052 - Merge Area

Validations:

Rule #	Rule Message	Severity
318	*Code was not found in lookup table or is not valid as of the crash date*	*Red/Severe*
319	*If Vehicle Movement Code = 6 then Vehicle Action Code must = 011, 012, 013, 022 or 023*	*Red/Severe*
320	*If Vehicle Movement Code = 7 or 8 then Vehicle Action Code must = 008, 009, 021, 023 or 032*	*Red/Severe*
321	*If Vehicle Movement Code = 9 then Vehicle Action Code must = 008 or 009*	*Red/Severe*

Vehicle Level Cause

VHCL_CAUSE_EVNT.VHCL_CAUSE_1_CD
VHCL_CAUSE_EVNT.VHCL_CAUSE_2_CD
VHCL_CAUSE_EVNT.VHCL_CAUSE_3_CD

Data Format: 2 char, 2 char, 2 char

Code	Description	
00	No cause associated at this level	*(Default value for PDO crashes effective 2016)**
11	Mechanical defect	
20	Vehicle improperly parked	
21	Defective steering mechanism	
22	Inadequate or no brakes	
24	Vehicle lost load, load moved or shifted	
25	Tire failure	
26	Phantom / non-contact vehicle	

Instructions:

Cause is a two-digit code that represents the circumstance(s) most responsible for the occurrence of the crash. If applicable, enter the Cause code(s) specific to this vehicle that explains why it was involved in the crash, in the order of predominance.

Up to three Cause codes are allowed at this level.

Enter **Code "00"** in the first Cause field if no Cause code applies to this vehicle.

Effective for 2016, **Cause is no longer coded to specific vehicles when Crash Severity is "Property Damage Only". Default screens set the Vehicle level Cause field to "00" and disable it so the value can't be changed. **Enter applicable codes in the Crash level "Cause" fields.***

Validations:

Rule #	Rule Message	Severity
321	*Code was not found in lookup table or is not valid as of the crash date*	*Red/Severe*

Vehicle Level Event

VHCL_CAUSE_EVNT.VHCL_EVNT_1_CD
VHCL_CAUSE_EVNT.VHCL_EVNT_2_CD
VHCL_CAUSE_EVNT.VHCL_EVNT_3_CD

Data Format: 3 char, 3 char, 3 char

Code	Description	
Blank	Not applicable at this level	*(Default value for PDO crashes effective 2016)**
004	Pedestrian indirectly involved (Not struck)	
006	Pedal-cyclist indirectly involved (Not struck)	
007	Hitchhiker (Soliciting a ride)	
010	Overturned after first harmful event	
011	Vehicle being pushed	
012	Vehicle towed or had been towing another vehicle	
013	Vehicle forced by impact into other vehicle, cyclist or pedestrian	
014	Vehicle set in motion by non-driver (Child released brakes, etc.)	
017	Train struck vehicle	
018	Vehicle struck train	
019	Vehicle struck railroad car on roadway	
020	Jackknife; trailer or towed vehicle struck towing vehicle	
021	Trailer or towed vehicle overturned	
022	Trailer connection broke	
023	Detached trailing object struck other vehicle, non-motorist, or object	*(Effective. 2004)*
024	Vehicle door opened into adjacent lane	
025	Wheel came off	
026	Hood flew up	
028	Lost load, load moved or shifted	
029	Tire failure	
030	Pet: cat, dog and similar	
031	Stock: cow, calf, bull, steer, sheep, etc.	
032	Horse, mule, or donkey	
033	Horse and rider	
034	Wild animal, game (Includes birds; not deer or elk)	
035	Deer or elk, wapiti	
036	Animal-drawn vehicle	
037	Culvert, open low or high manhole	
038	Impact attenuator	
039	Parking meter	
040	Curb (Also narrow sidewalks or bridges)	
042	Leading edge of guardrail	
043	Guard rail (Not metal median barrier)	
044	Median barrier (Raised or metal)	
045	Retaining wall or tunnel wall	
046	Bridge railing (on bridge and approach)	
047	Bridge abutment ~~(Approach ends)~~	*(Revised 2014)*
048	Bridge pillar or column (Even if struck protective guard rail first)	
049	Bridge girder (Horizontal bridge structure overhead)	*(Effective 2014)*

Vehicle Level Event

(Continued)

050	Traffic raised island
051*	Gore
052	Pole – type unknown
053	Pole – power or telephone
054	Pole – Street light only
055	Pole – Traffic signal and ped signal only
056	Pole – sign bridge
057	Stop or yield sign
058	Other sign, including street signs
059	Hydrant
060	Delineator or marker (Reflector posts)
061	Mailbox
062	Tree, stump or shrubs
063	Tree branch or other vegetation overhead, etc.
064	Wire or cable across or over the road
065	Temporary sign or barricade in road, etc.
066	Permanent sign or barricade in/off road
068	Foreign obstruction / debris in road (Not gravel)
069	Equipment working in/off road
070	Other equipment in or off road (Including parked trailer, boat)
071	Wrecker, street sweeper, snow plow or sanding equipment
072	Rock, brick or other solid wall *(Effective 2004)*
073	Other bump (not speed bump) pothole or pavement irregularity (Per PAR) *(Effective 2014)*
074	Other overhead object (highway sign, signal head, etc.); not bridge
075	Bridge or road cave in
076	High water
077	Snow bank
078	Low or high shoulder at pavement edge *(Effective 2014)*
079	Cut slope or ditch embankment
080	Struck by rock or other object set in motion by other vehicle, including lost loads *(Do not use with code 081)* *(Effective 2014)*
081	Struck by rock or other moving, falling or flying object (*Do not use with code 080)* *(Effective 2014)*
085	Wind gust
086	Vehicle immersed in body of water
087	Fire or explosion
089	Crash related to another separate crash
090	Two-way traffic on divided roadway all routed to one side
091	Building, other structure *(Effective 2014)*
092	Other (phantom) non-contact vehicle (On report)
095	Guy wire
096	Berm (Earthen or gravel mound)
097	Gravel in roadway

Vehicle Level Event

(Continued)

098	Abrupt edge	
100	Fixed object, unknown type	
101	Non-Fixed object, other or unknown type	
111	Street car / trolley (on rails and / or overhead wire) struck vehicle	
112	Vehicle struck street car / trolley (On rails or overhead wires)	
114	Vehicle struck railroad equipment (Not train) on tracks.	*(Effective 2014)*
117	Rail Crossing Drop Arm Gate	*(Effective 2014)*
118	Expansion joint	*(Effective 2014)*
120	Wire or cable median barrier	
121	Fence	*(Effective 2014)*
124	Sliding or swerving due to wet, icy, slippery or loose surface	*(Effective 2014)*
125	Shoulder gave way	
126	Rocks / boulder (Not gravel; not rock slide)	*(Effective 2014)*
127	Rock slide or land slide	*(Effective 2014)*
128	Curve present at crash location	*(Effective 2014)*
129	Vertical grade, hill present at crash location	*(Effective 2014)*
134	**Torrential rain (exceptionally heavy rain)**	**(Effective 2016)**

Instructions:

Vehicle Level Event is made up of up to three sets of three-digit codes that indicate events that occurred at the vehicle level of the crash.

Vehicle level event codes generally represent occurrences of injury or damage to a person or property, but may also indicate other circumstances related to the crash.

At the vehicle level, enter the event most relevant to the individual vehicle being coded, preferably in order of occurrence. Vehicle level events may also be applicable at the crash level.

Effective for 2016, **Event is no longer coded to specific vehicles when Crash Severity is "Property Damage Only". Default screens set the Vehicle level Cause field to "00" and disable it so the value can't be changed. **Enter applicable codes in the Crash level "Event" fields.***

Validations:

Rule #	Rule Message	Severity
90	*If Crash Type Code = 4 (Train), at least one vehicle on this crash must have a Vehicle-level event Code value of 111, 112, 113, 017, 018, or 019*	*Red/Severe*
91	*When Crash Type Code = 8 (Fixed Object), at least one Vehicle on this crash must have a vehicle-level Event Code value that is between 037 and 067, or between 077 and 079, or be one of the following values: 072, 073, 074, 088, 095, 096, 100, 118, 119, 120 or 127*	*Red/Severe*

Vehicle Level Event by Category

Event codes grouped by category. Some Events apply to more than one category.

(Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.)

Animal

030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
036	Animal-drawn vehicle

Avoiding

These codes may be used in conjunction with Vehicle Action code 007 (successful avoidance).

004	Pedestrian indirectly involved (Not struck)
006	Pedal-cyclist indirectly involved (Not struck)
007	Hitchhiker (Soliciting a ride)
030	Pet: cat, dog and similar
031	Stock: cow, calf, bull, steer, sheep, etc.
032	Horse, mule, or donkey
033	Horse and rider
034	Wild animal, game (Includes birds; not deer or elk)
035	Deer or elk, wapiti
036	Animal-drawn vehicle
068	Foreign obstruction / debris in road (Not gravel)
073	Other bump (not speed bump), pothole or pavement irregularity (Per PAR)
092	Other (phantom) non-contact vehicle (On PAR or report)

Distractions

004	Pedestrian indirectly involved (Not struck)
006	Pedal-cyclist indirectly involved (Not struck)
007	Hitchhiker (Soliciting a ride)

Fixed Object

037	Culvert, open low or high manhole
038	Impact attenuator
039	Parking meter
040	Curb (Also narrow sidewalks or bridges)
042	Leading edge of guardrail
043	Guard rail (Not metal median barrier)

Vehicle Level Event by Category

(Continued)

044 Median barrier (Raised or metal)
045 Retaining wall or tunnel wall
046 Bridge railing or parapet (On bridge or approach)
047 Bridge abutment ~~(Approach ends)~~
048 Bridge pillar or column (Even if struck protective guard rail first)
049 Bridge girder (Horizontal bridge structure overhead)
050 Traffic raised island
052 Pole – type unknown
053 Pole – power or telephone
054 Pole – street light only
055 Pole – traffic signal and/or ped signal only
056 Pole – sign bridge
057 Stop or yield sign
058 Other sign, including street signs
059 Hydrant
060 Delineator or marker (Reflector posts)
061 Mailbox
062 Tree, stump or shrubs
063 Tree branch or other vegetation overhead, etc.
064 Wire or cable across or over the road
066 Permanent sign or barricade in/off road
072 Rock, brick or other solid wall
073 Other bump (not speed bump), pothole or pavement irregularity (Per PAR)
074 Other overhead object (highway sign, signal head, etc.); not bridge
075 Bridge or road cave in
077 Snow bank
078 Low or high shoulder at pavement edge
079 Cut slope or ditch embankment
091 Building, other structure
095 Guy wire
096 Berm (Earthen or gravel mound)
098 Abrupt edge
100 Fixed object, unknown type
118 Expansion joint
119 Jersey Barrier
120 Wire or cable median barrier
121 Fence
126 Rocks / boulder (Not gravel; not rock slide)
127 Rock slide or land slide

Miscellaneous

010 Overturned after first harmful event
011 Vehicle being pushed

Vehicle Level Event by Category

(Continued)

012 Vehicle towed or had been towing another vehicle
013 Vehicle forced by impact into another vehicle, cyclist or pedestrian
051 Gore
076 High water
085 Wind gust
086 Vehicle immersed in body of water
087 Fire or Explosion
089 Crash related to another separate crash
090 Two-way traffic on divided roadway all routed to one side
094 Police report indicates teenage driver of an involved vehicle was in violation of graduated license program *(Effective 2000)*
124 Sliding or swerving due to wet, icy, slippery or loose surface
125 Shoulder gave way
128 Curve present at crash location
129 Vertical grade, hill present at crash location
134 Torrential rain (Exceptionally heavy rain) (Effective 2016)

Non Fixed Object

065 Temporary sign or barricade in road, etc.
068 Foreign obstruction / debris in road (Not gravel)
069 Equipment working in/off road
070 Other equipment in or off road (Including parked trailer, boat)
080 Struck by rock or other object set in motion by other vehicle, including lost loads *(Do not use with code 081)*
081 Struck by rock or other moving, falling or flying object *(Do not use with code 080)*
097 Gravel in roadway
101 Non-Fixed object, other or unknown type

Non-Motorist

004 Pedestrian indirectly involved (Pedestrian not struck)
006 Pedal-cyclist indirectly involved (Pedal-cyclist not struck)
007 Hitchhiker (Soliciting a ride)
011 Vehicle being pushed
024 Vehicle door opened into adjacent traffic lane
036 Animal-drawn vehicle

Occupant

014 Vehicle set in motion by non-driver (Child released brakes, etc.)

Vehicle Level Event by Category

(Continued)

Rail Related

017	Train struck vehicle
018	Vehicle struck train
019	Vehicle struck railroad car on roadway
111	Street car or trolley (On rails or overhead wires) struck vehicle
112	Vehicle struck street car / trolley (On rails or overhead wires)
113	At or on street car or trolley right-of-way
114	Vehicle struck railroad equipment on tracks (Not train)
117	Rail Crossing Drop Arm Gate

Vehicle Related

010	Overturned after first harmful event
011	Vehicle being pushed
012	Vehicle towed or had been towing another vehicle
013	Vehicle forced by impact into another vehicle, cyclist or pedestrian
014	Vehicle set in motion by non-driver (Child released brakes, etc.)
020	Jackknife: trailer or towed vehicle struck towing vehicle
021	Trailer or towed vehicle overturned
022	Trailer connection broke
023	Detached trailing object struck other vehicle, non-motorist, or object
024	Vehicle door opened into adjacent traffic lane
025	Wheel came off
026	Hood flew up
028	Lost load, load moved or shifted
029	Tire failure
071	Wrecker, street sweeper, snow plow or sanding equipment

Vehicle Speed Flag

Data Format: bit VHCL.VHCL_SPEED_FLG

Code	Description	
0	No	*(Default value for PDO crashes effective 2016*)*
1	Yes	

Instructions:

Vehicle Speed Flag is a yes/no field entered at the vehicle level. This field indicates that this vehicle was **driven in excess of the posted speed**.

Only use information from the police report, or the driver's own admission, in coding this field. Information provided on the PAR such as a citation or warning issued, calculated speed estimates, etc., may be used. DO NOT code this field based on witness statements.

Use **Code "0"** when this vehicle was **not** being driven in excess of the posted speed. For cases where a driver was traveling too fast for conditions, but was not driving in excess of the posted speed, enter 0 and use Participant Level Error code 047 (Too fast for conditions).

Use **Code "1"** when the PAR or this vehicle's driver admits he or she was exceeding the posted speed. Also enter Participant Level Error code 050 (Speeding).

Effective for 2016 crash data entry, Speed data is no longer collected for specific vehicles when Crash Severity is Property Damage Only.* ***Enter the applicable value in the Crash level "Cause" field.*

Validations:

Vehicle Hit and Run

Data Format: bit VCHL.VHCL_HIT_RUN_FLG

Code	Description	
0	No	*(Default value for PDO crashes, effective 2016*)*
1	Yes	

Instructions:

Vehicle Level Hit and Run is a yes/no field that indicates whether the operator fled the scene of the crash in this vehicle.

Use **Code "0"** if the vehicle remained at the scene, i.e. no "hit and run" occurred. Also use Code **"0"** if the driver fled the scene but left the vehicle at crash site. In that case, capture the driver's action of hit and run on the Participant Level.

Enter **Code "1"** if the police report states that the Hit and Run driver left the scene in this vehicle.

The PAR is the only accepted source of information for this field.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes.*

Validations:

Safety Equipment Use in Vehicle

VHCL.VHCL_SFTY_EQUIP_USED_QTY
VHCL.VHCL_SFTY_UNUSED_QTY
VHCL.VHCL_USE_UNKNOWN_QTY

Data Format: tinyint, tinyint, tinyint

Code	Description
	Equipment Used
00-99	Actual number of persons in vehicle who were using safety equipment
	Equipment Unused
00-99	Actual number of persons in vehicle who were not using safety equipment, or used equipment improperly.
	Equipment Use Unknown
00-99	Actual number of persons in vehicle for whom safety equipment use is not known.

Instructions:

Safety Equipment Use in Vehicle is made up of three sets of two-digit codes. This field records the **total number of vehicle occupants**, including un-injured passengers **over** age four*, according to whether or not they used safety equipment.

Entries are required for all three fields, for each vehicle coded.

In the first field, enter the total number of vehicle occupants who were using safety equipment (belts, booster seats, helmets, etc.).

In the second field, enter the total number of vehicle occupants who were not using safety equipment, or were using safety equipment improperly.

In the third field, enter the total number of vehicle occupants for whom safety equipment use is unknown.

This is the only field that records information on un-injured passengers **over age four. Participant records are not created for uninjured passengers in the Crash Data System.*

Validations:

Rule #	Rule Message	Severity
329	*When entered, [field name] must be numeric*	*Red/Severe*
336	*More participants in vehicle [vehicle sequence number] show safety equipment use than indicated on the vehicle row*	*Red/Severe*
337	*More participants in vehicle [vehicle sequence number] show safety equipment unused than indicated on the vehicle row*	*Red/Severe*
338	*More participants in vehicle [vehicle sequence number] show safety equipment use unknown than indicated on the vehicle row*	*Red/Severe*

Vehicle Occupant Count

Data Format: tinyint VHCL.VHCL_OCCUP_CNT

Code	Description
00-99	Total number of persons in vehicle

Instructions:

Vehicle Occupant Count is a derived field generated by the data entry system. It is calculated by adding the numbers that were entered into the following three fields:

- Safety Equipment Used
- Safety Equipment Un-used
- Safety Equipment Use Unknown

Verify that the total count is correct before proceeding to the next record.

Note that this number may not match the number of Participant records entered for the vehicle because no Participant record is created for un-injured passengers **over** age four.

Validations:

Section III: PARTICIPANT LEVEL

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Participant Number

Data Format: int PARTIC.PARTIC_ID

Code	Description
01-99	Number assigned to each coded participant by the Date Entry system, in sequential order

Instructions:

Participant Number is a system-generated number assigned sequentially for all participants. This number may be edited in order to change the entry order of the participants.

The Crash Data System records Participant Level data for:

- All drivers
- All children ages four and under, and
- All other **injured** participants

Participant records are not created for persons who are not drivers, are not injured, and are over age 04.

When multiple non-motorists (pedestrians, pedal-cyclists, etc.) are involved, create a Participant records only for the injured non-motorist.

Do not create a participant record for uninjured occupants of legally parked vehicles.

Validations:

Participant Level Vehicle Number

Data Format: int PARTIC.VHCL_ID

Code	Description
Blank	Injured pedestrian, pedal-cyclist or other non-motorist
01–99	Number assigned to each occupied vehicle by the Data Entry system, in sequential order

Instructions:

Participant level Vehicle Number is a two-digit field. It is a sequential number assigned by the data entry system for each vehicle recorded on the Participant Level. The code is system-generated, but may be changed by the Crash Data Technician to modify the entry order of participant records.

All occupants of a given vehicle are assigned the same vehicle number.

This field is blank for Participant records that represent injured pedestrians, pedal-cyclists and other non-motorists.

Do not enter a participant record for uninjured occupants of legally parked vehicles.

Validations:

Participant Level Vehicle Sequence Number

Data Format: 2 numeric PARTIC.PARTIC_VHCL_SEQL_NO

Code	Description
01-99	Assigned sequentially for occupants of a given vehicle.

Instructions:

Participant Vehicle Sequence (PVS) Number is a system-generated field. Once generated, it cannot be modified. The Data Entry system assigns this number sequentially for all occupants of a given vehicle, beginning with **"01"** for the driver. Numbering re-starts at **"01"** for occupants of the next vehicle, and for occupants of each subsequent vehicle.

Non-motorists are also numbered sequentially, beginning with "01". The PVS Number increases consecutively for each additional non-motorist, even though their records may not occur next to each other in the list of Participant records.

The example below shows how the Vehicle and PVS number would be assigned for a crash involving a vehicle with two occupants, a pedestrian, a second vehicle with one occupant, and a bicyclist.

Vehicle Number	PVS Number	Participant Type	
Code	Code	Code	Description
01	01	1	Driver of Vehicle No. 1
01	02	2	Passenger of Vehicle No. 1
Blank	01	3	*Pedestrian*
02	01	1	Driver of Vehicle No. 2
Blank	02	6	*Pedal-cyclist*

Validations:

Rule #	Rule Message	Severity
653	*When the Participant Type is 0, 1, 2 or 8 a valid Participant Vehicle Number is required*	*Red/Severe*
661	*When the Participant Type is 3, 4, 5, 6, 7 or 9 the Participant Vehicle Number must be null*	*Red/Severe*

Participant Type

Data Format: 1 char PARTIC.PARTIC_TYP_CD

Code	Description	MOTORISTS
0	Unknown occupant type in a motor vehicle in transport	
1	**Driver**	*(Default value for PDO crashes effective 2016)**
2	Passenger	

Code	Description	NON-MOTORISTS
3	Pedestrian	
4	Pedestrian using a pedestrian conveyance (wheelchair, skates, etc.)	
5	Pedestrian towing an object, other participant, conveyance, etc.	
6	Pedal-cyclist	
7	Pedal-cyclist towing an object, other participant, conveyance, etc.	
8	Occupant of a parked motor vehicle	
9	Other type of non-motorist (occupant of a non-motor vehicle, horse-drawn carriage, etc.)	

Instructions:

Participant Type is a one-digit code that represents the participant's role in the crash.

There are two categories of Participants; "*motorists*" and "*non-motorists*". A "motorist" is any occupant of a motor vehicle in transport. A "non-motorist" is any person other than a motorist *(see ANSI D16.1-2007, definitions 2.2.40 and 2.2.41)*.

Motor vehicles that are stopped, "parked" or left unattended within the travel portion of the roadway are "in transport". Their occupants are motorists. Participant Type ***must*** be coded 0, 1, or 2.
Examples of a "motor vehicle in transport" are:

- A vehicle driving within its intended lane
- A *driverless* motor vehicle, in motion, on the roadway
- A vehicle *parked improperly* on the travel portion of the road
- A motionless motor vehicle that is disabled or abandoned on a roadway (*see ANSI definition 2.2.34*)

Motor vehicles that are fully off the travel portion of the roadway (i.e., on the shoulder, or outside the trafficway boundaries) are not considered to be "in transport". Use Code 8 or 9 for their occupants.

**Effective for 2016 crash data entry, when Crash Severity = Property Damage Only, participant records are created for drivers only. The field defaults to "1" in PDO Default entry screens.*

Motorists

Code "0" is used when it is known that the participant was an occupant of a motor vehicle in transport, but the participant's role (i.e., driver or passenger) is not known.

Participant Type

(Continued)

Code "1" is used for the vehicle operator, i.e. driver. *"A driver is an occupant who is in actual physical control of a transport vehicle or, for an out-of-control vehicle, an occupant who was in control until control was lost." (See ANSI D16.1-2007, definition 2.2.37)*

Also use **code "1"** for operators of vehicles that are stalled or improperly parked on the travel portion of the roadway.

Code "2" is used for occupants of a motor vehicle in transport who are not the driver *(see ANSI D16.1-2007, definition 2.2.38).* For occupants who are riding on the exterior of the vehicle, or are otherwise attached to the outside of a vehicle, use code 2, and use Participant Level Event code 104.

Non-Motorists

Code "3" is used for:

- Pedestrians (unless they are towing another person or object. (See code 5)
- Persons who are on foot carrying, *or being carried by*, another person
- Persons who are **being towed** by a pedestrian. Also enter code **"008"** in the one of the Participant Level Event fields for this participant

Code "4" is used for a pedestrian who is on a conveyance, such as a wheelchair (including motorized wheelchairs), skates, skateboard, etc. For a participant using a non-motorized wheelchair, enter code 106 in the Participant Level Event field. For a participant using a motorized wheelchair, enter code 107 in the Participant Level Event field.

Code "5" is used for a pedestrian who is in the act of towing another person or object.

Code "6" is used for an occupant of a non-motorized pedalcycle in transport, and for:

- A person riding as a passenger on a pedal-cycle, including a tandem cycle. Also enter code 105 in one of the Participant Level Event fields for this participant
- A person who is **being towed** by a pedalcyclist. Also enter code **"008"** in one of the Participant Level Event fields for this participant

Code "7" is used for a pedalcyclist who is in the act of towing another person or object.

Code "8" is used for participants who are injured occupants of a motor vehicle that is legally parked, or illegally parked outside the travel portion of the roadway.

Code "9" is used for all other types of non-motorists, such as a rider on horseback, an occupant of a horse-drawn carriage, or other non-motorized device, etc.

Participant Type

(Continued)

Validations:

Rule #	Rule Message	Severity
630	*When Participant Type is 0, 1, 2, 6, 7 or 8, Safety Equipment Type must be specified*	*Red/Severe*
631	*When Participant Type is 3, 4, 5, or 9, Safety Equipment Type must be blank*	*Red/Severe*
653	*When the Participant Type is 0, 1, 2 or 8 a valid Participant Vehicle Number is required*	*Red/Severe*
661	*When the Participant Type is 3, 4, 5, 6, 7 or 9 the Participant Vehicle Number must be null*	*Red/Severe*
663	*When the Participant Type is 6 or 7 (Pedalcyclist), Safety Equipment Type must be 0, 5, 6, or 9*	*Red/Severe*
679	*When Participant Type is 1 (Driver), Safety Equipment Type must be 0, 1, 2, 5, 6, 8 or 9*	*Red/Severe*
680	*When Participant Type is 1 (Driver), the PVS value must be 01. Re-sequence participants if necessary*	*Red/Severe*
690	*Participant Type Code must = 8 for all occupants of properly parked motor vehicles*	*Red/Severe*

Participant Level Hit and Run

Data Format: bit PARTIC.PARTIC_HIT_RUN_FLG

Code	Description	
0	No	*(Default value for PDO crashes effective 2016)**
1	Yes	

Instructions:

Participant Level Hit and Run is a yes/no field that indicates whether or not a participant remained at the scene of the crash. The PAR is the only accepted source of information for this field.

Use **Code "0"** when this participant remained at the scene of the crash.

Use **Code "1"** if driver fled on foot, abandoning the vehicle at scene.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field defaults to "0" in PDO Default entry screens.*

Validations:

Public Employee

Data Format: bit PARTIC.PUB_EMPL_FLG

Code	Description	
0	No	*(Default value for PDO crashes effective 2016)**
1	Yes	

Instructions:

Public Employee is a yes/no field that indicates if a participant was employed by a public agency ***and*** was on duty at the time of the crash.

For the purposes of this manual, a public employee is any person employed by a city, county, state, or federal agency.

The following types of people are "public employees".

- Police officers
- Municipal firefighters
- Other government and public school employees (i.e. school bus drivers)
- Government construction workers / flaggers
- Military employees

Use **Code "0"** when the participant is **not** on duty as a public employee.

Use **Code "1"** when the participant **is** on duty as a public employee.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "0" in PDO Default entry screens.*

Validations:

Sex

Data Format: 1 char PARTIC.SEX_CD

Code	Description	
1	Male	
2	Female	
9	Unknown	*(Default value for PDO crashes effective 2016)**

Instructions:

Sex is a one-digit code that indicates the participant's gender.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "0" in PDO Default entry screens.*

Validations:

Age

Data Format: 2 char PARTIC.AGE_VAL

Code	Description
00	Age is unknown *(Default value for PDO crashes effective 2016)**
01	Infants from birth to less than two years of age
02-98	Actual age of participant 2 years or over
99	Ninety-nine years of age or over

Instructions:

Age is a two-digit code that represents the age of the participant at the time of the crash. The actual age is coded with the following exceptions:

Code "00" is used when the age of the participant is not known.

Code "01" is used when the age of the participant is an infant from birth to less than two years of age.

Code "99" is used when the participant is age 98 or older.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "00" in PDO Default entry screens.*

Validations:

Driver License Status

Data Format: 1 char PARTIC.DRVR_LIC_STAT_CD

Code	Description	
Blank	Participant is not a driver	
0	Not licensed	
1	Valid Oregon license or permit	
2	Valid license, other state or country	
3	Suspended / revoked	
4	Expired	
8	Other non-valid license	
9	Unknown if driver was licensed	*(Default value for PDO crashes effective 2016)**

Instructions:

Driver License Status is a one-digit code that indicates the class of license and the state that issued it.

Code "0" is used when a driver is not licensed, and when a driver is operating farm equipment or an ATV and does not hold a valid Oregon license, certificate, endorsement, or permit. **Drivers age 13 or younger cannot have a valid Oregon license.** Oregon may issue a hardship license to drivers as young as age 14, though this is rare. (See Other Permits and Licenses section below.)

Code "1" is used for drivers who have a valid Oregon license, Commercial Driver License (CDL), certificate, endorsement or permit and are operating their vehicle in compliance with their license restrictions. Examples are:

- Operator holding standard vehicle license (Class C)
- Certified operator age 16 or older driving farm equipment
- ATV or motorcycle operator who has a Class C license with an endorsement

Code "8" is used when the driver's license is not valid for any other reason. Examples include:

- Operating the vehicle in violation of conditions set by DMV, such as driving during hours prohibited by a hardship license
- Violating conditions of learner's permit; for example, violation of Graduated Driver License restrictions (Also enter 094 for Participant Level Event)
- Operating a vehicle without corrective lenses, when required
- Operating a heavy truck with no Commercial Driver's License

Code "9" is used when no information exists regarding the driver's license status, such as for a hit-and-run driver who was never located.

Driver License Status

(Continued)

Other Permits and License

1. **Special Instruction Permit:** issued to applicants who have no driving experience and are under 15 years of age.

2. **Moped-Restricted Driver License:** issued to moped-only operator's age 16 years or older.

3. **30- or 90-Day Temporary Driver Permit:** issued to persons who are otherwise qualified for the driving privilege but need additional time to obtain proof of legal presence or resolve an issue with the Social Security Administration.

4. **Disability Golf Cart Driver Permit:** issued only to persons with ambulatory disabilities per ORS 807.210(1). The cart must be operated in areas with designated speed of 25 mph or less, and is exempt from registration, vehicle equipment, and safety requirements.

5. **Student / Emergency Driver Permit:** issued only to persons age 14 or older.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "00" in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
685	*Driver License Status must be blank for non-drivers*	*Red/Severe*
687	*If Driver Age is between 01 and 13, Driver License Status must = "0"*	*Red/Severe*
688	*This is a rare occurrence. Please confirm that Driver Age is less than 14*	*Yellow/Warning*

Residence of Driver

Data Format: 1 char PARTIC.DRVR_RES_STAT_CD

Code	Description	
Blank	Participant is not a driver	
1	Oregon resident within 25 miles of home	
2	Oregon resident more than 25 miles from home	
3	Oregon resident – unknown distance from home	
4	Non-resident	
9	Unknown if Oregon resident	*(Default value for PDO crashes effective 2016)**

Instructions:

Residence of Driver is a one-digit code that indicates the proximity of residency to the location of the crash.

See the Mileage Chart on the following page for distances between Portland and other Oregon cities.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "9" in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
686	*Driver Residence must be blank for non-drivers*	*Red/Severe*

Mileage Table

MILEAGE TABLE	Albany	Ashland	Astoria	Baker City	Bend	Burns	Coos Bay	Corvallis	Eugene	Florence	Forest Grove	Grants Pass	Gresham	Klamath Falls	La Grande	McMinnville	Medford	Newberg	Newport	Ontario	Pendleton	Portland	Redmond	Roseburg	Salem	Springfield	The Dalles	Tillamook	Woodburn
Albany	-	219	158	351	123	253	147	11	44	94	73	179	78	213	329	50	207	50	65	383	277	69	121	111	24	43	152	92	40
Arlington	205	370	228	168	169	230	347	216	245	298	160	380	126	306	124	173	381	159	248	239	72	136	153	313	182	244	53	210	166
Ashland	219	-	374	447	200	299	182	222	178	202	290	41	295	64	472	264	12	269	252	428	442	285	216	108	240	176	331	309	255
Astoria	158	374	-	396	255	385	233	151	199	184	80	334	108	364	352	105	362	106	134	464	300	95	239	266	136	199	175	66	121
Baker City	351	447	396	-	247	164	466	356	356	404	328	488	294	383	44	341	459	327	393	72	96	304	230	421	350	352	221	378	333
Bandon	171	182	257	490	261	392	24	158	140	72	223	142	244	245	495	198	170	212	122	522	443	236	259	85	201	137	318	191	206
Beaverton	67	282	93	312	167	297	208	79	107	159	15	242	21	276	268	34	270	20	109	383	216	9	151	175	44	107	91	67	28
Bend	123	200	255	247	-	130	237	127	128	190	181	241	145	137	271	158	212	161	180	260	241	160	16	192	131	124	131	206	146
Brookings	249	146	339	559	295	424	107	238	216	155	306	105	327	208	565	280	134	294	205	555	525	317	311	168	272	220	400	274	289
Burns	253	299	385	164	130	-	367	257	259	320	311	339	275	235	205	288	311	291	310	130	198	290	146	322	261	253	260	336	276
Clatskanie	130	347	35	361	221	351	256	128	171	207	56	306	75	341	317	82	334	82	157	431	265	61	205	238	108	170	140	93	91
Condon	220	329	244	199	128	192	347	231	237	300	175	370	141	265	155	189	341	174	300	254	103	151	112	302	198	234	69	225	182
Coos Bay	147	182	233	466	237	367	-	135	116	48	200	142	220	245	471	174	170	188	98	498	419	212	235	85	177	113	294	167	186
Coquille	164	164	251	484	255	385	18	153	134	66	217	124	238	227	489	192	152	206	116	516	437	229	253	67	195	131	312	185	199
Corvallis	11	222	151	356	127	257	135	-	40	83	71	182	90	213	340	46	210	58	53	388	288	81	126	111	35	44	163	90	51
Cottage Grove	60	158	216	370	142	271	96	60	20	83	132	118	137	181	386	106	146	111	113	402	334	127	140	51	81	17	209	151	99
Dallas	31	248	129	364	146	276	164	29	70	112	51	208	71	242	320	25	236	37	70	406	268	60	144	140	15	73	143	64	32
Elgin	349	492	354	64	291	225	491	360	389	434	303	524	270	428	20	317	504	303	393	135	72	279	275	459	326	386	197	353	309
Enterprise	386	536	409	106	336	270	528	397	426	479	341	561	307	473	65	354	548	340	429	178	109	317	320	494	363	426	234	391	347
Eugene	44	178	199	356	128	259	116	40	-	61	112	138	120	173	369	86	166	94	91	388	318	110	126	71	64	4	193	130	81
Florence	94	202	184	404	190	320	48	83	61	-	151	162	172	234	422	126	190	139	50	450	371	164	188	94	118	65	245	119	135
Forest Grove	73	290	80	328	181	311	200	71	112	151	-	250	36	285	283	26	278	26	101	398	232	23	166	182	50	115	107	52	45
Fossil	213	309	264	195	108	172	328	218	218	280	195	350	166	245	175	209	321	194	280	233	123	171	92	282	218	214	89	245	236
Gold Beach	225	175	311	544	316	446	78	213	194	126	278	134	299	238	549	252	162	267	176	576	497	290	314	140	255	192	373	247	261
Grants Pass	179	41	334	488	241	339	142	182	138	162	250	-	254	104	504	224	29	229	212	470	452	245	257	68	199	136	327	269	216
Heppner	260	372	283	155	172	213	391	271	301	345	215	413	181	309	111	228	384	214	303	227	59	191	155	346	237	277	109	265	221
Hermiston	255	399	282	124	219	223	396	266	297	348	210	409	176	351	80	224	387	209	298	195	28	186	203	363	232	295	104	260	216
Hillsboro	73	292	87	322	176	306	206	78	117	156	6	252	30	286	278	32	280	20	106	391	226	17	160	184	50	117	101	58	37
Hood River	131	346	154	242	152	282	273	142	172	224	86	307	52	289	198	99	335	85	174	312	146	62	136	239	108	171	21	136	92
Independence	20	238	134	362	143	273	159	22	63	106	54	198	68	233	318	28	226	40	75	404	266	59	141	131	12	67	141	72	30
John Day	257	353	359	80	153	70	372	262	262	324	287	393	249	290	135	292	365	285	315	132	127	264	136	327	266	258	190	337	281
Junction City	31	193	177	358	130	260	116	26	14	63	97	153	109	187	359	72	181	84	77	391	308	100	128	85	54	18	183	116	72
Klamath Falls	213	64	364	383	137	235	245	213	173	234	285	104	282	-	408	259	76	263	265	365	378	279	153	171	234	170	268	303	250
La Grande	329	472	352	44	271	205	471	340	369	422	283	504	250	408	-	297	484	283	372	115	52	259	255	437	306	369	177	333	289
Lake Oswego	63	283	102	311	169	299	216	78	108	157	27	239	19	273	266	34	271	20	110	381	215	8	167	176	41	108	89	81	24
Lakeview	298	160	430	303	174	139	341	301	261	322	357	200	320	96	344	332	171	335	353	270	337	335	191	267	306	259	305	380	323
Lebanon	14	220	169	337	109	239	150	19	45	99	85	180	89	214	340	61	208	64	71	369	288	80	107	112	35	45	163	106	54
Lincoln City	76	289	110	392	189	319	123	74	122	75	76	238	99	292	348	50	266	65	25	450	296	88	187	170	57	122	171	44	76
Madras	147	243	213	240	42	172	262	152	151	214	140	283	103	179	251	153	255	138	204	278	199	118	26	216	155	148	89	190	133
McDermitt	390	346	532	256	277	147	514	404	406	467	458	410	422	306	299	435	381	438	458	184	351	437	293	469	408	400	407	483	423
McMinnville	50	264	105	341	158	288	174	46	86	126	26	224	49	259	297	-	252	14	76	411	245	38	156	157	26	90	120	67	33
Medford	207	12	362	459	212	311	170	210	166	190	278	29	282	76	484	252	-	257	240	442	454	273	228	96	227	164	343	297	243
Milton-Freewater	306	471	329	111	271	227	449	317	347	400	261	482	228	408	69	275	483	260	118	180	29	237	255	414	284	346	155	311	268
Milwaukie	71	287	101	309	173	303	220	81	112	161	30	243	16	277	265	42	275	28	116	380	214	7	171	179	44	111	88	75	28
Newberg	50	269	106	327	161	291	188	58	94	139	26	229	35	263	283	14	257	-	89	397	231	23	159	161	30	94	106	78	19
Newport	65	252	135	411	183	311	98	54	92	50	102	212	124	267	373	76	240	90	-	442	321	114	179	144	83	96	196	69	100
North Bend	144	185	230	463	235	364	3	132	113	45	197	145	220	248	467	171	173	185	95	495	416	209	233	88	174	111	291	164	191
Nyssa	386	433	480	85	263	133	501	391	391	453	413	473	377	368	128	425	445	411	437	13	180	388	271	456	395	387	305	462	409
Oakridge	82	179	232	329	96	226	145	82	42	103	153	167	157	131	367	128	167	135	136	356	337	151	112	98	106	34	235	171	123
Ontario	383	428	464	72	260	130	498	388	388	450	398	470	364	365	115	411	442	397	424	-	167	374	268	453	392	384	293	448	403
Oregon City	60	276	109	312	158	287	207	71	101	154	36	236	18	270	268	37	264	23	121	382	216	13	141	168	38	100	91	88	21
Pendleton	277	442	300	96	241	198	419	288	318	371	232	452	198	378	52	245	454	231	321	167	-	208	255	385	254	317	125	282	238
Portland	69	285	95	304	160	290	212	81	110	164	23	245	14	279	259	38	273	23	114	374	208	-	144	177	47	110	83	74	30
Prineville	140	236	242	211	35	156	254	144	144	207	169	276	132	172	230	174	247	167	197	250	222	146	19	209	148	141	117	219	163
Rainier	116	332	48	347	207	337	259	128	157	210	71	292	61	327	303	85	320	71	161	417	251	47	191	224	94	157	126	107	77
Redmond	121	216	239	230	16	146	235	126	126	188	166	257	129	153	255	156	228	159	178	268	225	144	-	190	129	122	114	204	144
Reedsport	120	181	206	439	211	341	27	108	89	21	173	141	193	244	444	147	169	162	71	471	392	185	209	73	150	87	267	141	159
Roseburg	111	108	266	421	192	322	85	111	71	94	182	68	186	171	437	157	96	161	144	453	385	177	190	-	132	68	260	201	148
St. Helens	98	314	66	329	189	319	240	109	139	192	53	274	43	308	285	67	302	52	143	399	233	29	173	206	76	138	108	103	59
Salem	24	240	136	350	131	261	177	35	64	118	50	199	56	234	306	26	227	30	83	392	254	47	129	132	-	64	129	74	17
Seaside	141	342	17	384	238	368	216	134	168	168	63	306	92	351	339	88	334	90	118	454	288	79	222	239	119	172	163	49	101
Sheridan	50	267	119	354	164	293	161	48	88	113	39	227	61	261	310	13	255	27	63	424	258	51	162	159	32	92	133	54	46
Silverton	36	252	132	347	130	260	183	47	77	130	56	212	49	246	296	40	240	30	97	389	244	42	128	145	14	77	120	88	13
Springfield	43	176	199	352	124	253	113	44	4	65	115	136	119	170	369	90	164	94	91	384	317	110	122	68	64	-	192	134	80
The Dalles	152	331	175	221	131	260	294	163	193	245	107	327	73	268	177	120	343	106	196	293	125	83	114	260	129	192	-	157	113
Tillamook	92	309	66	378	206	336	167	90	130	119	52	269	86	303	333	67	297	78	69	448	282	74	204	201	74	134	157	-	92
Toledo	60	259	142	409	176	305	105	48	87	57	109	219	131	260	380	83	254	97	7	436	328	121	174	151	83	91	203	76	98
Union	343	482	366	35	282	199	486	354	384	436	298	519	264	419	14	311	494	297	386	107	66	274	265	451	320	383	191	348	303
Vale	367	413	484	89	244	114	481	371	371	433	402	454	365	349	132	402	425	403	424	17	185	377	252	436	375	367	309	450	396
Vernonia	106	322	64	349	204	334	228	100	140	190	28	280	57	316	305	54	308	54	130	419	253	45	187	214	80	146	128	61	63
Woodburn	40	255	121	333	146	276	186	51	81	135	45	216	39	250	289	33	243	19	100	403	238	30	144	148	17	80	113	92	-

Mileages reflect the shortest distances between cities over state highways. For cities not on this list please call Dan Kaplan @ (503) 986-3160

Figure 55: Mileage Table

Prepared by the Oregon Department of Transportation - Transportation Development Division - Road Inventory and Classification Services unit.

Injury Severity

Data Format: 1 char PARTIC.INJ_SVRTY_CD

Code	Description
1	Fatal
2	Incapacitating (Serious\Major)
3	Non-incapacitating (Moderate)
4	Possible injury – complaint of pain (Minor)
5	Died prior to crash
7	No injury – newborn to age 4
9	No injury – participant over age 4 *(Default value for PDO crashes effective 2016)**

Instructions:

Injury Severity is a one-digit code that represents the extent of bodily harm sustained by a participant, as reported by the driver or investigating officer (except for fatalities – see Code 1, below). Code the more serious injury when a discrepancy exists between a driver report and officer's report.

*Effective for 2015 crash coding, **Pedestrians** and **Pedalcyclists** must be assigned an Injury Severity code of "1", "2", "3" or "4".

There is no legal requirement, nor option, for bicyclists and pedestrians to report when they're involved in a crash. In the absence of formal reporting from these participants, a decision had to be made regarding their injury severity. It was determined that, as vulnerable road users, bicyclists and pedestrians must receive at least a "possible injury" in collisions with motor vehicles.

Code "1" is used for participants who die as a result of injuries sustained in the crash. For the purposes of motor vehicle traffic crash classification, the death must occur within thirty days (24-hour periods) from the time of the crash. The death certificate is the final, official source of record for cause of death, death date and death time, when available.

Code "2" is used for participants who suffer incapacitating injuries. An incapacitating (severe or major) injury is a non-fatal injury which *"prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred". (See to ANSI D16.1-2007, definition 2.3.4)* Examples of incapacitating injuries include broken bones, severe bleeding, unconsciousness, etc.

Code "3" is used for participants who suffer non-incapacitating (moderate) injuries. A non-incapacitating injury not severe, but is *"evident to observers at the scene of the accident in which the injury occurred". (See to ANSI D16.1-2007, definition 2.3.5)* Examples of non-incapacitating injury include lumps, bruises, abrasions, swelling, minor bleeding, etc.

Code "4" is used for participants who report injury, but no injuries are apparent. Examples of possible/minor injury include momentary lapse of consciousness, complaint of pain, etc.

Injury Severity

(Continued)

Code "5" is used for participants who die prior to the crash. Example: a driver suffers a massive heart attack and dies while traveling on a trafficway. The subsequent loss of vehicle control results in injury to his passengers.

Code "7" is used for participant's age newborn to four years, who are not injured.

Code "9" is used for participants (driver, cyclist or pedestrian) over age four who are not injured.

Validations:

Rule #	Rule Message	Severity
629	*Crash Severity indicates at least one Participant was injured, but no Participant was coded with an injury*	*Red/Severe*
664	*When the Participant's Injury Severity is 7, the Participant Age must be 00 – 04*	*Red/Severe*
686	*Combination of Crash Severity and Injury Severity is not valid in the cross-reference table*	*Red/Severe*
688	*This is a rare occurrence. Please confirm that Driver Age is less than 14*	*Yellow/Warning*
689	*Died Prior to Crash is a very rare occurrence. Please verity the Injury Severity Code for this Participant*	*Yellow/Warning*

Participant Safety Equipment Use

Data Format: 1 char PARTIC.SFTY_EQUIP_USE_CD

Code	Description
Blank	Not applicable (Pedestrians, other types of non-motorists)
0	No safety equipment used
1	Seat belt or harness used improperly
2	Seat belt or harness, fastened
3	Child restraint used improperly
4	Child restraint used properly
5	Helmet used improperly
6	Helmet used properly
8	Equipment used, type unknown
9	Unknown if used *(Default value for PDO crashes effective 2016)**

Instructions:

Participant Level Safety Equipment Use is a one-digit code that records the type and use of safety equipment (properly or improperly) reported for each participant.

The Police Traffic Crash Report is the source of this information. When the information is not available or is unknown to the officer, the driver's report is the source.

This field applies to pedal-cyclists and *injured occupants of parked motor vehicles.*

Occupants of parked motor vehicles, whether injured or uninjured, are counted in the **Vehicle Level Safety Equipment Use** fields so that they are counted among the total number of persons involved, for reporting purposes. Because that field is validated against this one (Participant Level Safety Equipment Use), safety equipment use must be coded for injured occupants of parked motor vehicles.

Leave this field blank for pedestrians, and for occupants of most other non-motorized transport devices.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is set to "9" in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
630	*When Participant Type is 0, 1, 2, 6, 7 or 8, Safety Equipment Type must be specified*	*Red/Severe*
631	*When Participant Type is 3, 4, 5, or 9, Safety Equipment Type must be blank*	*Red/Severe*

Airbag Deployment

Data Format: 1 char PARTIC.AIRBAG_DEPLOY_IND

Code	Description
Blank	Not reported or not applicable *(Default value for PDO crashes effective 2016)**
0	Airbag is available on this vehicle but did not deploy
1	Airbag deployed
9	Airbag is available on this vehicle, but information about deployment is not given

Instructions:

Airbag Deployment is a one-digit code that indicates the general availability of airbags in a given vehicle, and whether or not the airbag deployed during the crash.

Information for this field is obtained from the PAR or driver report. This field is not intended to represent or imply further research into the availability of airbags for the subject vehicle.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
660	*When Participant is a Pedestrian or Pedalcyclist, the Airbag Deployed Indicator must be null.*	*Red/Severe*

Non-Motorist Movement

Data Format: 1 char PARTIC.MVMNT_CD

Code	Description	
Blank	Participant is a motorist	*(Default value for PDO crashes effective 2016)**
0	Unknown	
1	Straight ahead	
2	Turning right	
3	Turning left	
4	Making a U-Turn	
5	Backing	
6	Stopped in traffic	

Instructions:

Non-Motorist Movement is a one-digit code that indicates the movement of participants who were not occupants of a motor vehicle in transport, (i.e., a pedestrian, pedalcyclist, horse and rider, etc.).

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Validations:

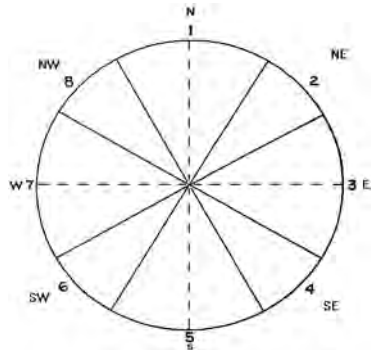
Rule #	Rule Message	Severity
634	*Participant Movement Code must be a 0 or 1 when Participant is a pedestrian who is not using pedestrian conveyance*	*Red/Severe*
636	*Participant Movement Code must be null when participant is a vehicle occupant*	*Red/Severe*
654	*Participant Movement Code is required when participant is a Pedestrian, Pedalcyclist or Unknown Non-motorist*	*Red/Severe*
662	*Discrepancy exists between Movement and From / To Direction*	*Red/Severe*

Non-Motorist Direction of Travel From / To

PARTIC.CMPSS_DIR_FROM_CD
PARTIC.CMPSS_DIR_TO_CD

Data Format: 1 char, 1 char

Code	Description
0	Unknown
1	North
2	Northeast
3	East
4	Southeast
5	South
6	Southwest
7	West
8	Northwest



Instructions:

Non-Motorist Direction of Travel contains two, 1-digit fields: **"Direction From"** and **"Direction To"**. Used together, these fields indicate the person's intended direction of travel.

The first field indicates the direction the participant came from.

The second field indicates the intended direction the participant was heading toward.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
662	*Discrepancy exists between Movement and From or To Direction*	*Red/Severe*

Non-Motorist Location

Data Format: 2 char PARTIC.NON_MOTRST_LOC_CD

Code	Description	
Blank	Not applicable (Not a non-mototrist)	*(Default value for PDO crashes effective 2016)**
00	At intersection – not in roadway	
01	At intersection – inside crosswalk	
02	At intersection – in roadway, outside crosswalk	
03	At intersection – in roadway, unknown if crosswalk is available	
04	Not at intersection – in roadway	
05	Not at intersection – on shoulder	
06	Not at intersection – on median	
07	Not at intersection – beyond shoulder, but within trafficway right-of-way	
~~*08*~~	~~*Not at intersection – in bike path or parking*~~	*(Terminated 2015)*
09	Not at intersection – on sidewalk	
10	Outside trafficway boundaries	
13	**At Intersection – in bike lane**	**(Effective 2016)**
14	**Not at intersection – in bike lane**	**(Effective 2016)**
15	Not at intersection – inside mid-block crosswalk	
16	**Not at intersection – in parking lane**	**(Effective 2016)**
18	Other – not in roadway	
99	Unknown location	

Instructions:

Non-Motorist Location is a two-digit code that indicates where the non-motorist (pedestrian, bicyclist, etc.) was located at the time of the crash.

This field was changed from Pedestrian Location to Non-Motorist Location at the start of the 2007 code year.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
641 & 658	*When the Participant is a pedestrian or pedalcyclist, a valid Non- Motorist Location value must be entered*	*Red/Severe*

Participant Level Action

Data Format: 3 char PARTIC_ACTN_CD

Code	Description	
000	No action or non-warranted	*(Default value for PDO crashes effective 2016)**
002	Getting on or off stopped vehicle or parked vehicle (code for driver or passenger)	
010	Passenger interfering with driver	
017	Lost control of vehicle	
022	Struck, or was struck by, vehicle or pedestrian in prior collision before crash stabilized	
024	Dead by unassociated cause	
025	Fatigued, sleepy, asleep	
026	Driver blinded by sun	
027	Driver blinded by headlights	
028	Physically ill	
030	Pursuing or attempting to stop a vehicle	*(Effective 2014)*
034	Crossing at intersection – no traffic signal present	
035	Crossing at intersection – traffic signal present	
036	Crossing at intersection – diagonally	
037	Crossing between intersections	
038	Driver's attention distracted	
043	Playing	
044	Pushing or working on vehicle	
045	Working (In or off roadway, not on a vehicle)	
046	Non-Motorist walking, running, riding, etc., with traffic	*(Effective 2014)*
047	Non-Motorist walking, running, riding, etc., facing traffic	*(Effective 2014)*
050	Standing or lying down	
052	Merging	*(Effective 2014)*
055	Blinded by water spray	*(Effective 2014)*
088	Other action	

Instructions:

Participant Level Actions a three-digit code that describes what the participant was doing, their condition, or other factors affecting the individual at the time of the crash.

An Action code must be entered at this level.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Validations:

Rule #	Rule Message	Severity
643	*When Participant is not a vehicle occupant, a Participant Action Code is required*	*Red/Severe*
644	*Participant Action was not found in the look-up table or is not valid for use as of the crash date*	*Red/Severe*

Participant Level Action by Category

Participant Action codes grouped by category. Some Actions apply to more than one category.

**Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.*

Non-Motorist

000	No action or non-warranted	
022	Struck, or was struck by, vehicle or pedestrian in prior collision before crash stabilized	
028	Physically ill	
030	Pursuing or attempting to stop a vehicle	*(Effective 2014)*
034	Crossing at intersection – no traffic signal present	
035	Crossing at intersection – traffic signal present	
036	Crossing at intersection – diagonally	
037	Crossing between intersections	
043	Playing	
044	Pushing or working on vehicle	
045	Working (In or off roadway, not on a vehicle)	
046	Non-Motorist walking, running, riding, etc., with traffic	*(Effective 2014)*
047	Non-Motorist walking, running, riding, etc., facing traffic	*(Effective 2014)*
050	Standing or lying down	
052	Merging	*(Effective 2014)*
055	Blinded by water spray	*(Effective 2014)*
088	Other action	

Occupant

000	No action or non-warranted	
002	Getting on or off stopped vehicle or parked vehicle (Code for driver or passenger)	
010	Passenger interfering with driver	
017	Lost control of vehicle	
024	Dead by unassociated cause	
025	Fatigued, sleepy, asleep	
026	Driver blinded by sun	
027	Driver blinded by headlights	
028	Physically ill	
030	Pursuing or attempting to stop a vehicle	*(Effective 2014)*
038	Driver's attention distracted	
055	Blinded by water spray	*(Effective 2014)*
088	Other action	

Error

Data Format: 3 char, 3 char, 3 char PARTIC_ERR.CRASH_ERR_CD

Code	Description
000	No error *(Default value for PDO crashes, eff. 2016)**
001	Wide turn
002	Cut corner on turn
003	Failed to obey mandatory traffic turn signal, sign or lane markings
004	Left turn in front of oncoming traffic
005	Left turn where prohibited
006	Turned from wrong lane
007	Turned into wrong lane
008	U-turned illegally
009	Improperly stopped in traffic lane
010	Improper signal or failure to signal
011	Backing improperly (Not parking)
012	Improperly parked
013	Improper start leaving parked position
014	Improper start from stopped position
015	Improper or no lights (Vehicle in traffic)
016	Inattention
017	Driving unsafe vehicle (No other error apparent)
018	Entering/exiting parked position with insufficient clearance; other improper parking maneuver
019	Disregarded other driver's signal
020	Disregarded traffic signal
021	Disregarded stop sign or flashing red
022	Disregarded warning sign, flares or flashing amber
023	Disregarded police officer or flagman
024	Disregarded siren or warning of emergency vehicle
025	Disregarded Rail Road signal, Rail Road sign, or Rail Road flagman
026	Failed to avoid stopped or parked vehicle ahead other than school bus
027	Did not have right-of-way over pedal-cyclist
028	Did not have right-of-way
029	Failed to yield right-of-way to pedestrian
030	Passing on a curve
031	Passing on the wrong side
032	Passing on straight road under unsafe conditions
033	Passed vehicle stopped at crosswalk for pedestrian
034	Passing at intersection
035	Passing on crest of hill
036	Passing in "No Passing" zone
037	Passing in front of oncoming traffic
038	Cutting in (two lanes - two way only)
039	Driving on wrong side of the road (Used for two-way, undivided roadways) *(Revised 2014)*

Error

(Continued)

040	Driving through safety zone or over island
041	Failed to stop for school bus
042	Failed to decrease speed for slower moving vehicle
043	Following too closely (Per PAR or driver admission)
044	Straddling or driving on wrong lanes
045	Improper change of traffic lanes
046	Wrong way on one-way roadway (Also when roadway has a solid or earth median and vehicle is traveling on wrong side)
047	Driving too fast for conditions (Not exceeding posted speed)
048	Opened door into adjacent traffic lane
049	Impeding traffic
050	Driving in excess of posted speed
051	Reckless driving (Per PAR or self-reported)
052	Careless driving (Per PAR or self-reported)
053	Speed Racing (Per PAR or self-reported)
054	Crossing at intersection – no traffic signal present
055	Crossing at intersection – traffic signal present
056	Crossing at intersection – diagonally
057	Crossing between intersections
059	Walking, running, etc., on shoulder with traffic
060	Walking, running, etc., on shoulder facing traffic
061	Walking, running, etc., on pavement with traffic
062	Walking, running, riding, etc., on pavement facing traffic
063	Playing in street or road
064	Pushing or working on vehicle in road or on shoulder
065	Working in roadway or along shoulder (Not on vehicle)
070	Standing or lying in roadway
071	Improper use of traffic lane by non-motorist *(Effective 2014)*
073	Eluding / Attempting to Elude *(Effective 2014)*
079	Failed to negotiate a curve *(Effective 2014)*
080	Failed to maintain lane
081	Ran off road
082	Driver misjudged clearance (Used only for signs, structures, etc.; not for parked vehicle.)
083	Over correcting / over-steering
085	Overloading or improper loading of vehicle with cargo or passengers
097	Unable to determine which driver disregarded traffic control device

Instructions:

Error is a three-digit code that provides a more specific and complete record of what occurred during the crash. Error codes may be applied to motorcycles, mopeds, and pedalcycles because they are operated under the same rules of the road as motor vehicles. Some Error codes are specific to non-motorists.

Error

(Continued)

Up to three errors may be coded.

Effective for 2016,* ***Error* *is no longer coded for individual participants when Crash Severity is "Property Damage Only".*

Validations:

Rule #	Rule Message	Severity
691	*Entered invalid Error Code (054 - 070) for Driver*	*Red/Severe*
700	*Participant Error Code must not equal '027' if no Pedalcyclist is involved in the crash*	*Red/Severe*
701	*Participant Error Code must not equal '029' if no Pedestrian is involved in the crash*	*Red/Severe*
1025	*Vehicle Speed-Inv indicates "exceeding posted limit". Corresponding Error codes are 050 or 053*	*Red/Severe*
1028	*Participant may have Error code 047 or 050, but not both*	*Red/Severe*

Error by Category

Error codes grouped by category. Some Errors apply to more than one category.

(Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.)

000 No error *(Default value for PDO crashes, eff. 2016)*

Turning

001 Wide turn
002 Cut corner on turn
003 Failed to obey mandatory traffic turn signal, sign or lane markings
004 Left turn in front of oncoming traffic
005 Left turn where prohibited
006 Turned from wrong lane
007 Turned into wrong lane
008 U-turned illegally

Improper Maneuvers

009 Improperly stopped in traffic lane
010 Improper signal or failure to signal
011 Backing improperly (Not parking)
012 Improperly parked
013 Improper start leaving parked position
014 Improper start from stopped position
015 Improper or no lights (Vehicle in traffic)
016 Inattention
017 Driving unsafe vehicle (No other error apparent)
018 Entering, exiting parked position with insufficient clearance or other improper parking maneuver

Disregarding Maneuvers

019 Disregarded other driver's signal
020 Disregarded traffic signal
021 Disregarded stop sign or flashing red
022 Disregarded warning sign, flares or flashing amber
023 Disregarded police officer or flagman
024 Disregarded siren or warning of emergency vehicle
025 Disregarded Rail Road signal, Rail Road sign, or Rail Road flagman
026 Failed to avoid stopped or parked vehicle ahead other than school bus

Right-of-Way Errors

027 Did not have right-of-way over pedal-cyclist
028 Did not have right-of-way
029 Failed to yield right-of-way to pedestrian

Error by Category

(Continued)

Passing Maneuvers

030 Passing on a curve
031 Passing on the wrong side
032 Passing on straight road under unsafe conditions
033 Passed vehicle stopped at crosswalk for pedestrian
034 Passing at intersection
035 Passing on crest of hill
036 Passing in "No Passing" zone
037 Passing in front of oncoming traffic
038 Cutting in (Two lanes - two way only)

Miscellaneous

039 Driving on wrong side of road (Used for two-way, undivided roadways) *(Effective 2014)*
040 Driving through safety zone or over island
041 Failed to stop for school bus
042 Failed to decrease speed for slower moving vehicle
043 Following too closely (Per PAR or driver admission)
044 Straddling or driving on wrong lanes
045 Improper change of traffic lanes
046 Wrong way on one-way roadway (Also when roadway has a solid or earth median and vehicle is traveling on wrong side)
048 Opened door into adjacent traffic lane

Basic Rule Errors

047 Driving too fast for conditions (Not exceeding posted speed)
049 Impeding traffic
050 Driving in excess of posted speed

Violations

051 Reckless driving (Per PAR or self-reported)
052 Careless driving (Per PAR or self-reported)
053 Speed Racing (Per PAR or self-reported)

Non-Motorist Errors

054 Crossing at intersection – no traffic signal present
055 Crossing at intersection – traffic signal present
056 Crossing at intersection – diagonally
057 Crossing between intersections
059 Walking, running, etc., on shoulder with traffic

Error by Category

(Continued)

060	Walking, running, etc., on shoulder facing traffic	
061	Walking, running, etc., on pavement with traffic	
062	Walking, running, riding, etc., on pavement facing traffic	
063	Playing in street or road	
064	Pushing or working on vehicle in road or on shoulder	
065	Working in roadway or along shoulder (Not on vehicle)	
070	Standing or lying in roadway	
071	Improper use of traffic lane by non-motorist	*(Effective 2014)*

Other

073	Eluding / Attempt to Elude	*(Effective 2014)*
079	Failed to negotiate a curve	*(Effective 2014)*
080	Failed to maintain lane	
081	Ran off road	
082	Driver misjudged clearance (used only for signs, structures, etc. Not for parked vehicle.)	
083	Over correcting / over-steering	
085	Overloading or improper loading of vehicle with cargo or passengers	
097	Unable to determine which driver disregarded traffic control device	

Participant Level Cause

PARTIC_CAUSE_ERR_EVNT.PARTIC_CAUSE_1_CD
PARTIC_CAUSE_ERR_EVNT.PARTIC_CAUSE_2_CD
PARTIC_CAUSE_ERR_EVNT.PARTIC_CAUSE_3_CD

Data Format: 2 char, 2 char, 2 char

Code	Description	
00	None applicable at this level	*(Default value for PDO crashes, eff. 2016)**
01	Speed too fast for conditions	
02	Did not yield right-of-way	
03	Passed stop sign or flashing red	
04	Disregarded traffic signal	
05	Drove left of center on two-way road	
06	Improper overtaking	
07	Followed too closely	
08	Made improper turn	
10	Other improper driving	
12	Other (Not improper driving)	
13	Improper change of traffic lanes	
14	Disregarded other traffic control device	
15	Wrong way on one-way roadway (Also when roadway has a solid or earth median and vehicle is traveling on wrong side)	
17	Physical Illness	*(Effective 2014)*
16	Driver drowsy / fatigued / sleepy	
18	Non-Motorist illegally in roadway	
19	Not visible: dark / non-reflective clothing	
26*	Phantom / Non-contact vehicle	
27	Inattention	
28	Non-Motorist Inattention	*(Effective 2014)*
29	Failed to avoid vehicle ahead	*(Effective 2014)*
30	Driving in excess of posted speed	
31	Speed Racing (Per PAR, or self-reported)	
32	Careless Driving (Per PAR, or self-reported)	
33	Reckless Driving (Per PAR, or self-reported)	
34	Aggressive Driving (Per PAR, or self-reported)	
40	View obscured	*(Effective 2014)*
50	Improper use of median or shoulder	*(Effective 2014)*

Instructions:

Cause is a two-digit code that represents the circumstance(s) most responsible for the occurrence of the crash. Enter the codes that represent circumstances specific to this participant that contributed to, or resulted in, the occurrence of the crash.

Up to three Participant Cause codes are allowed. Participant Cause codes may also apply at the Crash Level.

Use **Code "00"** if no cause code applies to this participant.

Participant Level Cause

(Continued)

Use **Code "01"** with discretion, for speed too fast for conditions. Speed may be "involved" and yet not be a contributing factor of the crash. Use this code when there are clear indications that violating the basic rule was a contributing factor.

Use **Code "05"** when the vehicle is straddling the center line or driving on wrong side of an undivided two way road.

Use **Code "10"** when a driver error was a factor in the crash, but no other cause code applies.

Use **Code "12"** when improper driving was **not** a factor in the crash, and no other cause code applies. Examples include: deer jumps out in front of vehicle, leaving driver no time to react, illness, passenger interfered with driver and mechanical defect. This code should only be used when no other cause is applicable to the crash.

Use **Code "15"** when the vehicle is traveling on the wrong side of a divided roadway or traveling the wrong direction on a one way road.

Use **Code "26"** when the participant was affected by a non-contact or phantom vehicle (a vehicle indirectly involved in the crash).

Code "34" is used only when the PAR states that the crash involved **aggressive driving**. *It must not be used based solely on witness statements*. *Do not use code "34" without approval from the Code Team Leader.*

Effective for 2016 crash data entry, **Cause is no longer coded for individual participants when the Crash Severity is "Property Damage Only". The field is left blank in PDO Default entry screens.* ***Enter applicable codes in the Crash level "Cause" fields.***

Aggressive Driving vs. Road Rage

Aggressive driving differs from road rage, which falls under "Deliberate Intent". True "road rage" crashes are excluded from the Crash Data System. **Unintentional** crashes related to road rage *are* entered into CDS, and identified at the Crash level using Cause code "34".

Aggressive driving is defined by NHTSA as *"…when an individual commits a combination of moving traffic offenses so as to endanger other persons or property." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/Driving-Safety/Aggressive-Driving)*

Example: Cutting other vehicles off, or deliberately preventing someone from merging ***but not intending to collide with the other vehicle.***

Participant Level Cause

(Continued)

Aggressive driving is a traffic offense. Road Rage is a criminal offense.

Road rage is defined as *"an assault with a motor vehicle or other dangerous weapon by the operator or passenger(s) of another motor vehicle, or an assault precipitated by an incident that occurred on a roadway." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/people/injury/research/aggressionwisc/chapter_1.htm)*

In order for an incident to be defined as **road rage** and excluded from CDS, there must be **"willful and wanton disregard for the safety of others."** In other words, road rage means that someone deliberately tried to harm you as a result of something that happened while you were driving your car.

Examples of Unintentional Crashes Resulting from "Road Rage"

(Enter these types of cases into the Crash Data System)

1. PAR describes a driver flashing lights and/or sounding the horn excessively, causing distraction to another driver, resulting in that other driver colliding with a vehicle or fixed object.
2. A motorist fleeing from a vehicle driven by an angry spouse crashes unintentionally into a third vehicle.

Examples of "Road Rage" Crashes

(Do not enter these types of cases into the Crash Data System.)

1. Driver or passenger throwing projectiles from a moving vehicle with the intent of damaging other vehicles, pedestrians or pedal-cyclists
2. Passenger or driver shooting at vehicles, pedestrians or pedal-cyclists
3. Intentionally causing a collision between vehicles
4. Exiting the car intending to start confrontations, including striking other vehicles with an object
5. Deliberately running other vehicle off the roadway
6. Deliberately striking a vehicle, pedestrian, pedal-cycle or object

Validations:

Rule #	***Rule Message***	***Severity***
695	*Cause Code [code value] not valid for Participant Type*	*Red/Severe*
703 - 707	*If CRASH level CAUSE code = [code field value], there must be at least one Driver, Bicyclist, or Bicyclist Towing with CAUSE = [code field value]*	*Red/Severe*

Participant Level Cause by Category

Cause codes grouped by category. Some Causes apply to more than one category.

(Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.)

00	None applicable at this level	*(Default value for PDO crashes, eff. 2016)**

Behavior

02	Did not yield right-of-way	
03	Passed stop sign or red flasher	
04	Disregarded traffic signal	*(Revised 2014)*
05	Drove left of center on two-way road	
06	Improper overtaking	
07	Followed too closely	
08	Made improper turn	
10	Other improper driving	
13	Improper change of traffic lanes	
14	Disregarded other traffic control device	
15	Wrong way on one-way roadway (Also when roadway has a solid or earth median and vehicle is traveling on wrong side)	*(Revised 2014)*
16	Driver drowsy / fatigued / sleepy	
17	Physical Illness	*(Effective 2014)*
18	Non-Motorist illegally in roadway	
19	Not visible: dark / non-reflective clothing	
27	Inattention	
28	Non-Motorist Inattention	*(Effective 2014)*
29	Failed to avoid vehicle ahead	*(Effective 2014)*
31	Speed Racing (Per PAR or self-reported)	
32	Careless Driving (Per PAR or self-reported)	
33	Reckless Driving (Per PAR or self-reported)	
34	Aggressive Driving (Per PAR or self-reported) Do *not use code "34" without approval from the Code Team Leader.*	
50	Improper use of median or shoulder	*(Effective 2014)*

Miscellaneous

10	Other improper driving	
12	Other (not improper driving)	
26	Phantom / non-contact vehicle	
40	View obscured	*(Effective 2014)*

Speed

01	Speed too fast for conditions (not exceeding limit)	
30	Driving in excess of posted speed	
31	Speed Racing (Per PAR or self-reported)	

Participant Level Event

PARTIC_CAUSE_ERR_EVNT.PARTIC_EVNT_1_CD
PARTIC_CAUSE_ERR_EVNT.PARTIC_EVNT_2_CD
PARTIC_CAUSE_ERR_EVNT.PARTIC_EVNT_3_CD

Data Format: 3 char, 3 char, 3 char

Code	Description	
Blank	Non applicable at this level	*(Default value for PDO crashes, eff. 2016)**
001	Occupant fell, jumped or was ejected from moving vehicle	
002	Passenger interfered with driver	
003	Animal or insect in vehicle interfered with driver	
005	"Sub-Ped" (Pedestrian injured subsequent to initial event, apply to Pedestrian record)	
007	Hitchhiker (Soliciting a ride)	
008	Passenger or non-motorist being towed or pushed on conveyance	*(Revised 2014)*
009	Actively getting on or off stopped or parked vehicle. (Must have physical contact with vehicle)	*(Revised 2014)*
080	Struck by rock or other object set in motion by other vehicle, including lost loads *(Do not use with code "081")*	
081	Struck by rock or other moving, falling or flying object *(Do not use with code "080")*	
082	Vehicle obscured view	
083	Vegetation obscured view	
084	View obscured by fence, sign, phone booth, etc.	
092	Other (phantom) non-contact vehicle (Per PAR or report)	
093	Cell phone (Per PAR or report submitted by driver using phone)	
094	Police report indicates teenage driver of this vehicle was in violation of graduated license program	
099	Cell phone use witnessed by other participant	
102	Texting	*(Revised 2014)*
103	Work Zone Worker *(Applies to this Participant and at Crash level)*	*(Effective 2014)*
104	Passenger riding on vehicle exterior	
105	Passenger riding on pedalcycle	
106	Pedestrian in non-motorized wheelchair	
107	Pedestrian in motorized wheelchair	
108	Law Enforcement / Police Officer	*(Effective 2014)*
109	"Sub-Bike" (Pedal-cyclist injured subsequent to collision, etc.)	*(Effective 2014)*
110	Non-motorist struck vehicle	
115	Distracted by navigation system or GPS device	*(Effective 2014)*
116	Distracted by other electronic device	*(Effective 2014)*
123	Loose object in vehicle struck occupant	*(Effective 2014)*
130	View obscured by curve	*(Effective 2014)*
131	View obscured by vertical grade, hill	*(Effective 2014)*
132	View obscured by vehicle window conditions	*(Effective 2014)*
133	View obscured by water spray	
134	**Torrential rain (Exceptionally heavy rain)**	***(Effective 2016)***

Participant Level Event

(Continued)

Instructions:

Event is a three-digit code that describes an incident or situation specific to this Participant Record that contributed to the crash. Events generally represent occurrences of injury or damage to a person or property, but they may also identify other factors.

At the participant level, enter the Event(s) most relevant to the participant, preferably in order of occurrence. Participant level Events may also be applicable at the Crash level.

Event **Code "005"** -Sub-Ped **must** be coded to the Pedestrian's record; **not** to the Driver or Vehicle record.

If more than three Events occur, code the three most significant events in relation to this Participant.

When Event **Code "094"** is used, **Drivers License Status** must be coded "8 –Other non-valid license" (includes Graduated Drivers License violations).

Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.* ***Enter applicable codes in the Crash level "Event" fields.*

Validations:

Rule #	Rule Message	Severity
649	*If Crash Type = 3 (Pedestrian) then no Participant Event Code can be 005 (sub-ped)*	*Red/Severe*
683	*Event not valid for participant type*	
708	*If a Pedestrian is struck as the first harmful event, Crash Type must = 3 and Collision Type must = 0. If Pedestrian is struck subsequent to the first harmful event, enter Event code 005 on the Crash Level and on the Participant Level for the Pedestrian*	

Participant Level Event by Category

Event codes grouped by category. Some Events apply to more than one category.

(Effective for 2016 crash data entry, information for this field is no longer collected for Property Damage Only crashes. The field is left blank in PDO Default entry screens.)

Blank Not applicable at this level *(Default value for PDO crashes, eff. 2016)**

Avoiding

May be used in conjunction with Vehicle Action code **"007"** (successful avoidance).

007 Hitchhiker (Soliciting a ride)
092 Other (phantom) non-contact vehicle

Distractions

002 Passenger interfered with driver
003 Animal or insect in vehicle interfered with driver
007 Hitchhiker (Soliciting a ride)
093 Cell phone (*Per PAR or report submitted by driver using phone)*
099 Cell phone use witnessed by other participant
102 Texting
115 Distracted by navigation system or GPS device
116 Distracted by other electronic device

Non Fixed Object

080 Struck by rock or other object set in motion by other vehicle, including lost loads (*Do not use with code "081")*
081 Struck by rock or other moving, falling or flying object (*Do not use with code "080")*

Non-Motorist

005 "Sub-Ped" (Pedestrian injured subsequent to collision, etc.)
007 Hitchhiker (Soliciting a ride)
103 Work Zone Worker *(Applies to this Participant and at Crash level)*
105 Passenger riding on pedalcycle
106 Pedestrian in non-motorized wheelchair
107 Pedestrian in motorized wheelchair
108 Law Enforcement / Police Officer
109 "Sub-Bike" (Pedalcyclist injured subsequent to collision, etc.)
110 Non-motorist struck vehicle

Participant Level Event by Category

(Continued)

Occupant

001 Occupant fell, jumped, or was ejected from moving vehicle
008 Passenger being towed or pushed on conveyance
009 Actively getting on or off stopped or parked vehicle (Has physical contact with vehicle)
014 Vehicle set in motion by non-driver (Child released brakes, etc.)
094 Police report indicates teenage driver of this vehicle was in violation of graduated license program
103 Work Zone Worker *(Applies to this Participant and to the Crash level)*
104 Passenger riding on vehicle exterior
108 Law Enforcement / Police Officer
109 "Sub-Bike" (Pedal-cyclist injured subsequent to collision, etc.)
123 Loose object in vehicle struck occupant

View Obscured

082 Vehicle obscured view
083 Vegetation obscured view
084 View obscured by fence, sign, phone booth, etc.
130 View obscured by curve
131 View obscured by vertical grade, hill
132 View obscured by vehicle window conditions
133 View obscured by water spray
134 Torrential rain (Exceptionally heavy rain) ***(Effective 2016)***

Blood Alcohol Content (BAC) Test Results

Data Format: 2 char PARTIC.BAC_VAL

Code	Description
Blank	Not available
00-79	Actual BAC test result, in hundredths (Enter the leading zero for values lower than .10)
80	.80 or greater
84	Suspect sample
85	Test refused
86	No test administered
87	Test administered, results unknown

Instructions:

BAC Test Results is a two-digit code that represents the actual Blood Alcohol Content test result, other converted test result, or other information regarding the availability of a BAC test result. The only acceptable sources for this information are the police report (from the reverse side of the face sheet, or from the narrative, including statements about hospital findings), crime lab reports, and medical examiner toxicology reports.

This field applies to **all participant records**, regardless of injury severity.

Leave this field blank when no BAC testing information is available for this participant.

BAC test results represent **hundredths** of a percent. Do not enter the decimal point. It is assumed.

Do not round the BAC test result. If test results show more than two digits to the right of the decimal, ignore them. *This instruction represents a change from coding practice prior to 2003.*

Enter **both digits** to the right of the decimal point. For BAC results **lower than .10**, the leading zero must be entered. Omitting the leading zero (i.e. "1" instead of "01") misrepresents the BAC value as being *10 times higher than the actual test result* (**.10** *instead of* **.01**).

- For BAC results **.01 through .09**, enter "01", "02", "03", "04", "05", "06", "07", "08", or "09"
- Very high BAC results **(.35 and over)** are rare. Cases involving high BACs must be reviewed by the Code Team Leader

Code "80" is used when the BAC is .80 or above, and no official statement is available to indicate that the sample was contaminated or suspect.

Code "86" is used when the police report indicates that no test was given, and no other official record is received to indicate otherwise (i.e. a crime lab or medical examiner toxicology report).

Code "87" is used when the police report indicates that a test was administered, but results are not available.

Blood Alcohol Content (BAC) Test Results

(Continued)

Code "84" is used when an official report is received that indicates the BAC sample tested was contaminated or "suspect".

Code "85" is used when the police report indicates that the subject refused to submit to testing.

Validations:

Rule #	Rule Message	Severity
650	*When entered, BAC Value must be between 00-79, or be 80, 84, 85, 86 or 87*	*Red/Severe*
692	*BAC values between .35 and .80 are very rare. Please verify before continuing*	*Yellow/Warning*
693	*When entered, BAC values must contain two digits. Enter a leading zero for values less than "10"*	*Red/Severe*

Alcohol Use Reported

Data Format: 1 char PARTIC.ALCHL_USE_RPT_IND

Code	Description
Blank	Not reported; no information provided regarding alcohol use by this participant
0	Police report that participant had **not** been drinking
1	Police report that participant **had** been drinking; or suspect admits it
9	Police report that it is **unknown** if participant had been drinking; or conflicting info exists on driver reports

Instructions:

Code this field for all participants, regardless of participant type or injury severity.

Alcohol Use Reported is a one-digit code that represents a participant's use of alcohol as indicated by police. A participant's admission of his own alcohol use is also considered reliable information for coding this field "yes" (code "1"). Statements made by other drivers or witnesses, about someone other than themselves, are not considered reliable information for this field.

For non-fatal cases, if a police report is not available, use whatever reliable information exists to code this field.

This field is coded independently of tests results received through other sources other than the PAR. *Medical Examiner test results have no bearing on the coding of the "Alcohol Use Reported" field, unless it is clear that the officer used those test results to make his determination.* (This instruction differs from what is allowed for coding the "Drug Use Reported" field.)

For example, an officer may note in the report that he suspected a driver had been drinking, but test results received separately from the police report are negative for alcohol. The officer's initial observation takes precedence in this instance. (Several hours may pass between the time an officer makes a determination of alcohol-involvement at the scene, and the time the suspect is testing, potentially resulting in a BAC result of .00. In such a case, enter **"1"** in the Alcohol Use Reported field, and **"00"** in the BAC Test Results field.)

Leave this field blank when there is no information regarding alcohol use for this participant.

Code "0" is used when the police report positively states that this participant had not been drinking. Do not use driver statements for this code.

Code "1" is used when the officer indicates that this participant had been drinking, or when the participant admits to having been drinking.

Alcohol Use Reported

(Continued)

Common indicators from officers are:

- observations made at the scene
- officer states odor of alcohol
- preliminary breath tests
- field sobriety tests
- BAC test results noted in the report narrative
- conclusion stated in narrative

Code "9" is used when the officer states that it is unknown whether this participant had been drinking, or conflicting information exists in the drivers' reports. The officer's report takes precedence when using this code.

Validations:

Drug Use Reported

Data Format: 1 char PARTIC.DRUG_USE_RPT_IND

Code	Description
Blank	Not reported
0	Participant had **not** been using drugs
1	Participant **had been using** drugs (Reported by police, **test results,** or suspect admits it)
9	**Unknown** if participant had been using drugs (As reported by police; no tests available)

Instructions:

Code this field for all participants, regardless of injury severity.

Drug Use Reported is a one-digit code that represents drug use by the participant, as reported by an officer, by the participant's own statement, by crime lab results, or by Medical Examiner toxicology reports.

Leave this field blank when no information exists to indicate drug use for this participant. This instruction represents a change from coding practice prior to 2003.

Code "0" is used when the police report specifically states that this participant had ***not*** been using drugs, and/or test results are negative for drugs.

Code "1" is used when the officer indicates that this participant had been using drugs, when the participant admits to having been using drugs, or test results are positive for drugs. Common indicators by officers are:

- Observations made at the scene
- Field testing
- Test results noted in the police report

Code "9" is used when the police report indicates that it is unknown whether or not this participant had been using drugs, and no test results are received to indicate otherwise.

Validations:

Marijuana Use Reported

Data Format: 1 char PARTIC.MJ_USE_RPT_IND

Code	Description
Blank	No information is available regarding use of cannabis
0	Negative *(See instructions)*
1	Positive *(See instructions)*
2	Suspected *(See instructions)*
3	Not Suspected *(See instructions)*
9	Unknown *(See instructions)*

Instructions:

Marijuana Use is a one-digit code that indicates whether a crash participant **was impaired** by cannabis (codes 0 and 1) according to lab test results or police. Code this field for all participants.

Cannabis can be stored in the body **for weeks**. *Therefore, its presence in lab test results does not necessarily confirm impairment, or even recent use.* The **type** of test and **when it was performed relative to ingestion** are important considerations. Drug Recognition Expert (**DRE**) and **ARIDE** evaluations are considered *highly accurate* in identifying whether a subject is impaired by cannabis. Standard Field Sobriety Tests (SFST's) are not sufficient for determining cannabis impairment. A subject's admission to using cannabis products is not sufficient for determining marijuana impairment.

The coding requirements for this field are unique. Entries may not correspond to values entered in the Drug Use Reported field.

Leave this field blank when no information exists to indicate whether this crash participant used cannabis, i.e. when:

- ✓ The PAR checkbox for "marijuana" is blank, ***and***
- ✓ No information on the use of cannabis is provided in the narrative or supplemental police reports for this participant; ***and***
- ✓ Lab test results for this participant are not available, ***and***
- ✓ The participant does not admit to using marijuana

Code "0" (Negative) is used when:

- ✓ **Blood** test is *negative ("fails to confirm the presence of")* **tetrahydrocannabinols (THC)**, ***or***
- ✓ A certified DRE or ARIDE evaluation *does not specify* impairment by cannabis for this participant.

Code "1" (Positive) is used when:

- ✓ **Blood** test is *positive ("confirms the presence of")* **tetrahydrocannabinols (THC)**, ***or***
- ✓ A DRE or ARIDE evaluation indicates the use of cannabis products by this participant.

*When "Marijuana Use Reported" is coded "1", "**Drug Use Reported**" must also be coded "1".*

Code "2" (Suspected) is used when:

- ✓ **Blood** test result "*detects the presence of cannabinoids, but these results are not confirmed*", ***or***
- ✓ **Urine** or other test indicates the presence of 9-Carboxy-THC, cannabis, or its metabolites; ***or=***

Marijuana Use Reported

(Continued)

- ✓ Police indicate that marijuana was used or is suspected; but don't specify the source is a DRE, ARIDE evaluation, or blood test; ***or***
- ✓ In the absence of a police report, the participant admits having used cannabis products within two hours of the crash. Police reporting takes precedence.

Code "3" (Not Suspected) is used when:

- ✓ The police report states "None" for impairment though no lab test was given or no certified DRE or ARIDE evaluation was performed.

Code "9" (Unknown) is used when:

- ✓ The police report it is unknown to them whether this participant had been using cannabis, ***or***
- ✓ Lab tests are inconclusive (i.e., the sample is contaminated or otherwise unreliable), ***or***
- ✓ The participant admits having used cannabis products more than two-hours from the time of the crash

Scenarios

1. The officer indicates that a **DRE** evaluation was positive for marijuana. No blood test results are available in the crash information packet
   - *Enter **"1" (Positive)** for **Marijuana Use Reported** and enter **"1"** for **Drug Use Reported***
2. Toxicological examination "indicates the presence of the following; *however, this is not confirmed*: Cannabinoids (or "9-Carboxy-THC")
   - *Enter "**2" (Suspected)** for **Marijuana Use Reported***
3. Driver states he'd "smoked weed a couple hours ago" but police officer checks "No" for drug use.
   - Enter **"2" (Suspected)** for **Marijuana Use Reported.** *Enter **"0"** for **Drug Use Reported***
4. Officer checks "No" under general Drug category on the PAR. No other information is available
   - *Leave the **Marijuana Use Reported** field **blank**. Enter **"0"** for **Drug Use Reported***
5. Police find marijuana in the vehicle. Driver stated she had used it the night before. PAR checkboxes are blank and no other information is available
   - *Leave the **Marijuana Use Reported** and the **Drug Use Reported** fields **blank***
6. Driver admits to having used marijuana earlier in the day. No length of time reported between ingestion and crash
   - *Code the **Marijuana Use Reported** and the **Drug Use Reported** fields **"9"** (Unknown)*
7. Officer checks "None" under impairment and indicates this was based on anything other than a certified DRE or ARIDE evaluation or lab test such as statements, observations, etc. or there was nothing else mentioned on how no impairment was determined.
   - *Code the Marijuana Use Reported field "3" (Not Suspected)*

Marijuana Use Reported

(Continued)

8. Driver states he wasn't using marijuana, but vehicle passengers were smoking it when the crash occurred. PAR checkboxes are blank, and no other information is provided
    - *Code the **Marijuana Use Reported** field **"9"** (Unknown)*

Validations:

Rule #	Rule Message	Severity
	When Participant Marijuana Use Reported = 1, Participant Drug Use Reported must also = 1	*Red/Severe*

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Section IV: SYSTEM GENERATED FIELDS

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Crash ID

Data Format: numeric CRASH.CRASH_ID

Code	Description
9999999	Primary Key. Sequential number automatically generated by the Data Entry System

Instructions:

Crash ID is the unique identifier assigned to every crash by the Crash Data System, without regard to DMV Serial Number, County, or Year. It is not visible on the Data Entry Screen, because the system generates the ID number when the crash case is saved.

The CRASH_ID field is the primary key field for the CRASH table, and one of several primary key fields in VHCL, PARTIC and other CDS data tables.

Jurisdiction Group

Data Format: 2 char

JRSDCT_GRP.JRSDCT_GRP_CD

Code	Description
1	National Forest
2	State Forest
3	National Park
4	State Park
5	Bureau of Land Management
6	Indian Reservation
7	Other Federal Jurisdiction
8	Other Type Jurisdiction (non-federal land)
9	Unknown Jurisdiction

Instructions:

Jurisdiction Group is a one-digit system-generated code that indicates the category of agency having jurisdiction over the area in which the crash occurred. The system-generated code is based on the value entered into the Special Jurisdiction field. A ten-character, alphabetic “short description” will be automatically generated in the data entry screen.

This field is only populated for crashes that occur on special jurisdiction roadways. For all other crashes, this field will remain blank.

Alcohol Involved Flag

Data Format: bit CRASH.ALCHL_INVLV_FLG

Code	Description
0	No
1	Yes

Instructions:

Alcohol-Involved Flag is a system-generated code indicating whether an *active participant** in the crash had been using alcohol. The data entry system populates this field based on the values coded to the Participant Level BAC Test Results and Alcohol Use Reported fields.

*An **"active participant"** is a person who was in a position of control during the crash: a driver, pedestrian, pedal-cyclist or other non-motorist.

Code "0" is generated when no active participants were reported to have been drinking, and no positive BAC test result was received for any active participant.

Code "1" is generated when at least one active participant was reported to have been drinking, or a positive BAC test result (.01 or higher) was received for any active participant.

Note: *Prior to 2003, BAC test result information was collected for fatally injured participants only. Non-fatally injured participants were flagged as to whether or not they had been drinking, but actual BAC values were not reported. As of 2003, the Crash Data System includes BAC test results on all participants for whom the information is received. The increase in alcohol-involvement figures for 2003 and later years represents, at least in part, an improvement in data collection and reporting, rather than an actual increase in alcohol-involved traffic crashes.*

Drug Involved Flag

Data Format: bit CRASH.DRUG_INVLV_FLG

Code	Description
0	No
1	Yes

Instructions:

Drug-Involved is a system-generated code indicating whether an *active participant** in the crash was reported to have used drugs. The data entry system populates this field based on the Participant Level Drug Use Reported field.

*An **"active participant"** is a person who was in a position of control during the crash: a driver, pedestrian, pedal-cyclist or other non-motorist.

Code "0" is generated when no active participants were reported to have used drugs.

Code "1" is generated when at least one active participant was reported to have used drugs.

Note: *Prior to 2003, drug-involvement was summarized along with alcohol data, and was not broken out separately in the Crash Data System. As of 2003, the Crash Data System reports drug involvement for all participants for whom the information is received.*

Marijuana Involved Flag

Data Format: bit CRASH.MJ_INVLV_FLG

Code	Description
0	No
1	Yes

Instructions:

Marijuana-Involved is a system-generated code indicating whether an *active participant** in the crash:

- Had a positive blood test result for THC, or
- Had a DRE evaluation that indicated marijuana use
- Had an ARIDE evaluation that indicated marijuana use

* An **"active participant"** is a person who had a measure of control over the crash circumstances: a driver, pedestrian, pedal-cyclist or other non-motorist.

The data entry system populates this field based on the Participant Level Marijuana Use Reported field.

Code "0" is generated when no active participants had a positive blood test result for THC, or a positive DRE or ARIDE evaluation for marijuana.

Code "1" is generated when at least one active participant had a positive blood test for THC, or a positive DRE or ARIDE evaluation for marijuana.

Note: *This field was introduced as of the 2016 crash data entry year.*

Speed Involved Flag

Data Format: bit CRASH.CRASH_SPEED_INVLV_FLG

Code	Description
0	No
1	Yes

Instructions:

Speed-Involved Flag exists on the Crash Level as a system-generated value. This field indicates whether or not a ***driver*** involved in the crash was exceeding the posted speed, driving too fast for conditions, or speed racing.

The data entry system populates this field based on the Vehicle Speed Flag, the Participant Error field, and the Crash or Participant Cause fields.

Hit and Run Flag

Data Format: bit PARTIC.PARTIC_HIT_RUN_FLG

Code	Description
0	No
1	Yes

Instructions:

Hit and Run is a system-generated code indicating that a participant fled the scene of the crash, on foot or in a vehicle. It is populated according to the values coded in the Vehicle and Participant Level Hit and Run fields.

*Effective for 2016 crash data entry, information on Hit and Run is *no longer collected for Property Damage Only crashes*. PDO default values for vehicles and participants cause the Crash level flag to be set to "0".

Population Range

Data Format: 1 char CRASH.POP_RNG_CD

Code	Description		
0	1	to	500
1	501	to	1,000
2	1,001	to	2,500
3	2,501	to	5,000
4	5,001	to	10,000
5	10,001	to	25,000
6	25,001	to	50,000
7	50,001	to	100,000
8	100,001	to	200,000
9	Over 200,000		

Instructions:

Population Range is a system-generated code that represents the estimated number of persons living in the incorporated area in which the crash occurred. This field is only populated for crashes that occur in incorporated cities.

Codes are based on annual estimates published by Portland State University.

Road Control

Data Format: 1 char CRASH.RD_CNTRL_CD

Code	Description
1	Portland city street
2	Portland highway system
3	Urban city street outside of Portland
4	Urban highway system outside of Portland city limits
5	Rural highway system
6	Rural county road
7	Rural city street
8	Sub-urban highway system
9	Sub-urban road

Instructions:

Road Control is a system-generated code that identifies the governmental jurisdiction over the road on which the crash occurred. Urban areas are based on Federal Aid Urban Transportation Boundaries (FAUB), which is typically updated every 10 years at the time of the national census.

Code "1" is generated for crashes on city streets inside Portland city limits.

Code "2" is generated for crashes on state highways located inside Portland city limits.

Code "3" is generated for crashes on city streets that are inside city limits (other than Portland) and FAUB. Both conditions must be met.

Code "4" is generated for crashes on state highways located inside city limits (other than Portland) and FAUB. Both conditions must be met.

Code "5" is generated for crashes on state highways located outside FAUB.

Code "6" is generated for crashes on streets under county jurisdiction that are outside city limits and outside FAUB. Both conditions must be met.

Code "7" is generated for crashes on streets that are inside incorporated city limits but outside FAUB.

Code "8" is generated for crashes on state highways located outside city limits but inside FAUB.

Code "9" is generated for crashes on county roads that are outside city limits but inside FAUB.

Route Type/Route Number

CRASH.RTE_TYP_CD
CRASH.RTE_ID

Data Format: 2 char, 5 char

Code	Description
IS xxx	Interstate route, followed by the number on the shield
OR xxx	Oregon route, followed by the number on the shield
US xxx	US route, followed by the number on the shield

Instructions:

Route Number is a system-generated value representing the route type (IS, OR, or US) and posted shield number for the state highway on which the crash occurred.

This field is populated according to values contained in TransInfo, and is only applicable for crashes that occur on the state highway system.

ODOT Region

Data Format: 1 char CRASH.REG_ID

Code	Description
1	Region 1 – Portland /Metro; Clackamas and Hood River Counties
2	Region 2 – Willamette Valley and Coast
3	Region 3 – Southwestern Oregon
4	Region 4 – Central Oregon
5	Region 5 – Eastern Oregon

Instructions:

The Oregon Department of Transportation divides its highway operations into five geographical regions. Each region is responsible for developing and managing the construction of highway projects, plus the maintenance of state, federal, and interstate highways within its boundaries.

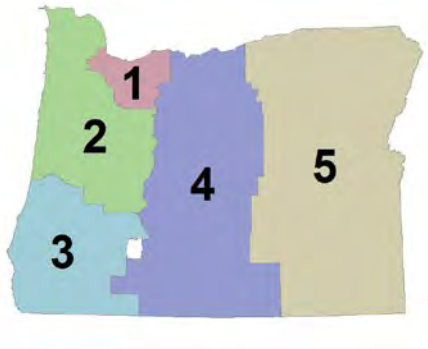

Figure 56: ODOT Regions

Region maps can be found at: https://www.oregon.gov/odot/data/pages/maps.aspx

Region 1 includes the Eastern portion of Washington County, Multnomah County, Clackamas County and most of Hood River County.

Region 2 includes Clatsop County, Columbia County, Tillamook County, the Western portion of Washington County, Yamhill County, Polk County, Marion County, Lincoln County, Benton County, Linn County, and Lane County.

Region 3 includes Coos County, Douglas County, Curry County, Josephine County, most of Jackson County and a small portion of Klamath County.

Region 4 includes a small portion of Hood River County, Wasco County, Sherman County, Gilliam County, Jefferson County, Wheeler County, Crook County, Deschutes County, a small portion of Jackson County, most of Klamath County, and Lake County.

Region 5 includes Morrow County, Umatilla County, Union County, Wallowa County, Grant County, Baker County, Harney County, and Malheur County.

Data for this field is available for years 2007 and later.

ODOT District

Data Format: 3 char CRASH.DIST_ID

Code	Description
01	District 1
02B	District 2B
02C	District 2C
03	District 3
04	District 4
05	District 5
07	District 7
08	District 8
09	District 9
10	District 10
11	District 11
12	District 12
13	District 13
14	District 14

Instructions:

There are 14 ODOT Maintenance Districts across the state. Each District is responsible for the day to day maintenance and operation of the state highways in their geographic area.

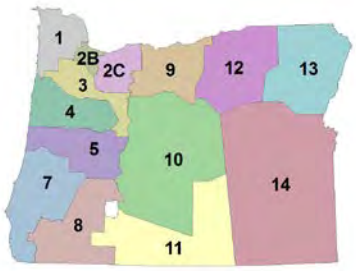

Figure 57: ODOT Districts

District maps can be found at: https://www.oregon.gov/odot/data/pages/maps.aspx

District 1 includes all or portions of Clatsop County, Columbia County, Tillamook County and the Western portion of Washington County.

District 2B includes all or portions of Washington County, Multnomah County and a portion of Clackamas County.

District 2C includes all or portions of Multnomah County, Hood River County and Clackamas County.

District 3 includes all or portions of Yamhill County, Polk County, Marion County, Linn County and Lane County.

District 4 includes all or portions of Tillamook County, Polk County, Lincoln County, Benton County and Linn County.

ODOT District

(Continued)

District 5 includes all or portions of Linn County, Lane County, and Klamath County.

District 7 includes all or portions of Douglas County, Coos County, and Curry County.

District 8 includes all or portions of Douglas County, Josephine County, Jackson County, and Klamath County.

District 9 includes all or portions of Wasco County, Sherman County, Gilliam County, Morrow County, and Wheeler County.

District 10 includes all or portions of Jefferson County, Wheeler County, Deschutes County, Crook County, Harney County, Klamath County and Lake County.

District 11 includes portions of Jackson County, Klamath County, Lake County, and Harney County.

District 12 includes all or portions of Morrow County, Umatilla County, Union County, Gilliam County, Wheeler County, and Grant County.

District 13 includes all or portions of Umatilla County, Wallowa County, Union County, Grant County, and Baker County.

District 14 includes all or portions of Grant County, Baker County, Harney County, and Malheur County.

Data for this field is available for year 2007 and later.

Unlocatable Crash Flag

Data Format: bit CRASH.UNLOCT_FLG

Code	Description
0	No
1	Yes

Instructions:

The Unlocatable Flag identifies crashes for which the location is unknown or for which linework does not exist in the GIS road network used for crash data entry.

Code "0" indicates a crash location has been identified in the database.

Code "1" indicates that either:

- The crash report didn't provide enough information to identify the incident location, or
- Linework didn't exist in the "OR-Trans" road network layer used for geocoding crash points at the time the case was coded.

The process used to set the Unlocatable Flag will load default spatial coordinates in the Latitude and Longitude fields. These default coordinates represent a point **off the road network** but **still within the local jurisdiction** where the crash occurred.

Set the Unlocatable Flag when coding:

- A crash that occurred on a state highway or mile-pointed county road at an unknown milepoint (MP = 999.99),
- A crash on a city street or non-milepointed county road where the nearest intersecting street is unknown,
- A crash on a city street or non-milepointed county road where the distance and/or direction from the nearest intersecting street is unknown

How to set the Unlocatable Flag:

Open the Crash Locator Tool (CLT), click the "**Crash**" drop-down menu, and select the "**Place Unlocatable Crash**" option. This will open a dialog box. Click the drop-down menu that best reflects the jurisdiction of the crash location.

Note: *Some cities & urban areas cross county boundaries. Be sure to select the city or urban area option that matches the county in which the crash occurred.*

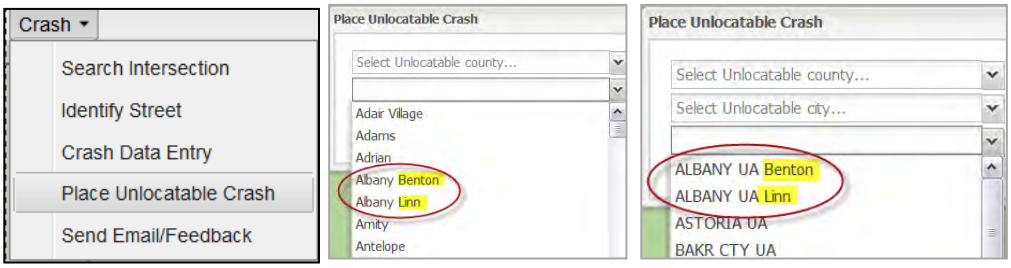

Figure 58: Unlocatable Flag Examples

Unlocatable Flag

(Continued)

- If the crash occurred **inside city limits**, click the drop-down menu for "**Unlocatable City**", then select the desired city or Portland City Section.

- If the crash occurred **outside city limits but still inside** the Federal Aid Urban Boundary (FAUB), click the drop-down menu for "**Unlocatable Urban Area**", then select the desired UA.

- If the crash occurred **outside city limits and outside** a FAUB, click the drop-down menu for "**Unlocatable County**", then select the desired county.

- Click **"OK**", and then click the "**Import/Close**" button at the top left corner of the CLT. The word "Yes" will be loaded into the Unlocatable Flag field in the CDS data entry screen.

Data for this field is available for year 2007 and later.

Segment Marker ID

Data Format: 30 varchar CRASH.SEG_MRK_ID

Code	Description
Varies	A unique road segment identifier

Instructions:

Segment Marker ID is a unique identifier assigned to an individual road segment in OR-Trans and is used to relate a crash to that segment. It is used in conjunction with Segment Point LRS Measure in GIS applications to enforce the co-incidence of a crash point and its specific location on a road segment line, in order to maintain the crash point at that location when linework is adjusted for correction or improvement.

The value for this field is automatically loaded into the Crash Data Entry Screen from the Crash Locator Tool (CLT) when the CLT is used to import crash location data.

Data for this field is available for year 2007 and later.

Segment Point LRS Measure

Data Format: float CRASH.SEG_PT_LRS_MEAS

Code	Description
Varies	The measure in feet of a highway or road in relation to the beginning of the road

Instructions:

Segment Point LRS Measure* is a measure, expressed in feet, along an individual road segment that specifies the location of a crash on the segment. It is used in conjunction with Segment Marker ID in GIS applications to enforce the co-incidence of a crash point and the specific location on a road segment line, in order to maintain the crash point at that location in case linework is adjusted at a future date.

The values for this field are calculated and supplied by a GIS analyst, and uploaded to the Crash table via a batch process.

*Data for this field is available for year 2007 and later.

Crash Level Summary Fields

Data Format: integer, not null

Code	Description
xxx	Total occurrences in a given crash

Instructions:

The following fields are populated automatically based on the codes, vehicle records, and participant records entered for a given crash. Values are computed and stored after the Crash Data Technician presses the "Save/Validate" button on the Data Entry screen.

The fields are computed and stored in the CRASH table to simplify querying and enhance the response time during reporting.

Total Vehicle Count: CRASH.TOT_VHCL_CNT

The number of vehicles involved in this crash, excluding phantom or other non-contact vehicles. This derived field is calculated based on the number of vehicle records entered for this crash.

Total Fatality Count: CRASH.TOT_FATAL_CNT

The number of **people killed** as a result of this crash. This derived field is calculated based on the number of participant records with a Participant Injury Severity value of 1.

Total Serious Injury Count: CRASH_TOT_INJ_LVL_A_CNT

The number of people who were seriously injured (but not killed) in this crash. This derived field is calculated based on the number of participant records with a Participant Injury Severity value of 2.

Total Moderate Injury Count: CRASH.TOT_INJ_LVL_B_CNT

The number of people who were moderately injured in this crash. This derived field is calculated based on the number of participant records with a Participant Injury Severity value of 3.

Total Minor Injury Count: CRASH.TOT_INJ_LVL_C_CNT

The number of people who received minor injuries in this crash. This derived field is calculated based on the number of participant records with a Participant Injury Severity value of 4.

Total Non-Fatal Injury Count: CRASH.TOT_INJ_CNT

The number of people who were injured in the crash (not fatally). This derived field is calculated based on the number of participant records with a Participant Injury Severity value of 2 (Serious Injury), 3. (Moderate Injury), or 4 (Minor/Possible Injury).

Total Count of Un-Injured Children Age 00-04: CRASH.TOT_UNINJD_AGE00-04_CNT

The number of children, newborn to age 4, who were involved in the crash but were not injured. This derived field is calculated based on the number of participant records where Age is between 01 and 04 and Injury Severity = 7.

Crash Level Summary Fields

(Continued)

Total Un-Injured Persons Count: CRASH.TOT_UNINJD_PER_CNT

The number of all persons involved in the crash who were not injured. This derived field is calculated based on the total number of persons involved (**TOT_PER_INVLV_CNT**), minus the number of persons injured (**TOT_INJ_CNT**) and killed (**TOT_FATAL_CNT**).

Total Pedestrian Count: CRASH.TOT_PED_CNT

The number of pedestrians involved in this crash. This derived field is calculated based on the number of participant records where Participant Type is 3, 4 or 5.

Total Pedestrian Fatality Count: CRASH.TOT_PED_FATAL_CNT

The number of pedestrians killed as a result of this crash. This derived field is calculated based on the number of pedestrians (Participant Type = 3, 4 or 5.) in the crash that had a Participant Injury Severity value of 1 (Fatality).

Total Pedestrian Non-Fatal Injury Count: CRASH.TOT_PED_INJ_CNT

The number of pedestrians who were non-fatally injured in this crash. This derived field is calculated based on the number of pedestrians (Participant Type = 3, 4 or 5.) in the crash that had a Participant Injury Severity value of 2 (Major Injury), 3 (Intermediate Injury), or 4 (Minor Injury).

Total Pedal-cyclist Count: CRASH.TOT_PEDCYCL_CNT

The number of participants in a crash that were pedal-cyclists. This derived field is calculated based on the number of participants in the crash that have a Participant Type of 6 or 7.

Total Pedal-cyclist Fatality Count: CRASH.TOT_PEDCYCL_FATAL_CNT

The number of pedalcyclists killed as a result of the crash.

Total Pedal-cyclist Non-Fatal Injury Count: CRASH.TOT_PEDCYCL_INJ_CNT

The number of persons with a Participant Type = 6 or 7 (Pedal-cyclist) that were injured in this crash. This derived field is calculated based on the number of Pedal-cyclists (Participant Type = 6 or 7) in the crash that had a Participant Injury Severity value of 2 (Major Injury), 3 (Intermediate Injury), or 4 (Minor Injury).

Total Unknown Non-Motorist Count: CRASH.TOT_UNKNWN_CNT

The number of participants in a crash that were an unknown type of non-motorist. This derived field is calculated based on the number of participants in the crash that have a Participant Type of 9.

Total Unknown Non-Motorist Fatality Count: CRASH.TOT_UNKNWN_FATAL_CNT

The number of other or unknown non-motorist fatalities that occurred in this crash. This derived field is calculated based on the number of participant records where (Participant Type = 9) in the crash that had a Participant Injury Severity value of 1 (Fatality).

Crash Level Summary Fields

(Continued)

Total Unknown Non-Motorist Injury Count: CRASH.TOT_UNKNWN_INJ_CNT

The number of persons with a Participant Type = 9 (unknown non-motorist) that were injured in this crash. This derived field is calculated based on the number of Unknown Non-motorists (Participant Type = 9) in the crash that had a Participant Injury Severity value of 2 (Major Injury), 3 (Intermediate Injury), or 4 (Minor Injury).

Total Vehicle Occupant Count: CRASH.TOT_OCCUP_CNT

The number of vehicle occupants involved in the crash. This derived value is computed based on the sum of the Vehicle Level "Occupant Count" field for all vehicles in this crash. (That value is, in turn, derived from the sum of the vehicle occupants that were using / were not using / or have an unknown use of safety equipment.)

Note: It is assumed that this summary value will include, at the minimum, all the Participants that have a Participant Type Code of "0", "1", or "2". However, since uninjured passengers over the age of 4 are not captured at the Participant level, and we cannot merely sum the participant information to get the total number of vehicle occupants. Instead, we must rely on the values that the coder entered at the vehicle level, indicating how many total occupants were / were not using safety equipment, or for which the use of safety equipment is unknown. Those values are intended to capture information for all occupants, whether or not they were coded at the participant level.

Total Count of Persons Involved: TOT_PER_INVLV_CNT

The number of persons involved in the crash, including un-injured persons for whom no "participant" record is created. This derived value is computed based on the sum of the Total Pedestrian Count + Total Pedalcyclist Count + Total Unknown Count + Total Occupant Count.

Total Persons Using Safety Equipment: TOT_SFTY_EQUIP_USED_QTY

The number of participants in a crash that were using available safety equipment at the time of the crash. This derived field is calculated based on two items:

- **The sum of the "Vehicle Safety Equipment Used Qty"** on all vehicles that are coded in this crash, **plus**
- **The number of Pedalcyclists (Participant Type Code = "6") where the value of the Safety Equipment Use Code = "6"**, indicating that the Pedalcyclist properly used a helmet at the time of the crash.

Other safety equipment usage by Pedalcyclists or safety equipment usage by Pedestrians (such as helmet usage by pedestrians using a skateboard) is not counted since that usage is not mandated by legislation.

Note: *It is assumed that the "**Vehicle Safety Equipment Used Quantity**" will include, at the minimum, all the Participants that have a Participant Type Code of 0, 1, or 2 that were correctly using available safety equipment. However, since uninjured passengers over the age of 4 are not captured at the*

Crash Level Summary Fields

(Continued)

Participant level, we cannot merely sum the participant information to get the total number of vehicle occupants using safety equipment. Instead, we must rely on the values that the Coder entered at the vehicle level. That value is intended to capture information for all vehicle occupants, whether or not they were coded at the participant level.

Total Persons Not Using Safety Equipment: TOT_SFTY_EQUIP_UNUSED_QTY

The number of participants in a crash for whom safety equipment was available at the time of the crash, but it was not used. This derived field is calculated based on two items:

- The sum of the "Vehicle Safety Equipment Unused Qty" on all vehicles that are coded in this crash, plus
- The number of Pedalcyclists (Participant Type Code = “6”) where the value of the Safety Equipment Use Code = “5”, indicating that the Pedalcyclist either did not use a helmet, or used one improperly at the time of the crash.

The lack of other safety equipment usage by Pedalcyclists, or safety equipment usage by Pedestrians (such as helmets not being used by pedestrians using a skateboard) is not counted since that usage is not mandated by legislation.

Note: *It is assumed that the "**Vehicle Safety Equipment Unused Quantity**" will include, at the minimum, all the Participants that have a Participant Type Code of “0”, “1”, or “2” that were not using or were incorrectly using available safety equipment. However, since uninjured passengers over the age of 4 are not captured at the Participant level, we cannot merely sum the participant information to get the total number of vehicle occupants that were not using safety equipment. Instead, we must rely on the values that the coder entered at the vehicle level. That value is intended to capture information for all vehicle occupants, whether or not they were coded at the Participant level.*

Total Persons Safety Equipment "Use Unknown": TOT_SFTY_EQUIP_USE_UNKNWN_QTY

This element contains the total number of participants in a crash where it is not known (or not reported) if safety equipment was used. This derived field is calculated based on two items:

- The sum of the "Vehicle Safety Equipment Use Unknown Qty" on all vehicles that are coded in this crash, plus
- The number of Pedalcyclists (Participant Type Code = 6) where the value of the Safety Equipment Use Code = 9, indicating that it is unknown whether or not the Pedalcyclist used a helmet at the time of the crash.

Other unknown safety equipment usage by Pedalcyclists or unknown safety equipment usage by Pedestrians (such as helmet usage by pedestrians using a skateboard) is not counted since that usage is not mandated by legislation.

Note: *It is assumed that the "**Vehicle Safety Equipment Use Unknown Quantity**" will include, at the minimum, all the Participants that have a Participant Type Code of 0, 1, or 2 for which the usage of*

(Continued)

safety equipment is unknown. However, since uninjured passengers over the age of 4 are not captured at the Participant level, we cannot merely sum the participant information to get the total number of vehicle occupants with unknown safety equipment usage. Instead, we must rely on the values that the Coder entered at the vehicle level. That value is intended to capture information for all vehicle occupants, whether or not they were coded at the Participant level.

Section V: APPENDIX

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Glossary

A selection of terms that appear in this publication are listed below, with the definitions in use by the Crash Analysis and Reporting (CAR) Unit data technicians. The CAR Unit makes no assertion that these definitions are officially recognized or are to be relied upon as standard definitions for persons or entities outside this unit. For information on national standards for motor vehicle traffic crash classification, please refer to the American National Standard Institute's (ANSI) D16.1-2007 Manual on Classification of Motor Vehicle Traffic Accidents.

Active Participant – A crash participant who has a measure of control over the crash circumstances, such as a driver, pedestrian, pedal-cyclist, or other non-motorist who is not a being pushed or towed on a conveyance.

Add Mileage –The term "add-mileage" generally applies when milepoints have increasing values in the direction of travel. The Pacific Highway 1, Interstate 5, is the only exception in that the add-mileage is accumulated in the direction of decreasing milepoints.

Advanced Roadside Impaired Driving Enforcement (ARIDE) – was created to address the gap in training between the Standardized Field Sobriety Testing (SFST) and the Drug Evaluation and Classification (DEC) Program. ARIDE is intended to bridge the gap between these two programs by providing officers with general knowledge related to drug impairment and by promoting the use of DREs in states that have the DEC Program.

Aggressive driving is defined by NHTSA as *"…when an individual commits a combination of moving traffic offenses so as to endanger other persons or property." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/Driving-Safety/Aggressive-Driving)*

Angle Collision – An angle collision results when a vehicles collide while traveling on crossing paths. An angle collision involves one vehicle ON a roadway (i.e. North to south) and another vehicle From another roadway, open access or driveway. (i.e. East to West). In other words, a cross-movement on one street must be attempted by a vehicle traveling on the intersecting street in order for the type to be classed as angle.

Arterials –provide mobility, typically carrying high traffic volumes on a continuous network with no stub routes but provide very little direct land access. A stub route is when a roadway classification stops midway through the road. Arterials must connect from roadway to roadway.

At-intersection crash – An at-intersection crash in a traffic crash in which the first harmful event occurs within the limits of an intersection *(see ANSI D16.1-2007, definition 2.7.3)*.

Backing Collision – A backing collision results when a vehicle is backing in a traffic lane and strikes another vehicle also in a traffic lane. This type will not include backing during a parking maneuver.

Channelization – A method or several methods or devices in which traffic is deliberately directed or diverted to another roadway or lane.

Glossary

(Continued)

Collectors – Provide both mobility and land access gathering trips from localized areas and feed them onto the arterial network.

Connection – A street or road, open to vehicular travel, which joins a road from the state highway system to any other road, entity, or to another state-owned road. A connection is usually much shorter than a spur or frontage road.

Couplet – The two roadways of a divided highway, often named differently, approximately parallel with traffic flow in opposite directions and separated by accessible land uses. Examples of couplets include:

- Marion Street bridge and Center Street Bridge on Hwy 030 in Salem
- Liberty Rd and Commercial Street on Hwy 072 in Salem
- Vista Ridge Tunnels of Sunset Hwy on Hwy 047 in the Portland area. (Sunset Hwy couplet carries only one name.).

Divided Highway – A two-way highway with the directions separated by more than 4 feet. (This includes most of the Interstate System.)

Drug Recognition Expert (DRE – A law enforcement officer trained to identify people whose driving is impaired by drugs other than, or in addition to, alcohol. DREs often testify in court, where the term "expert" has important legal implications.

Fatal Crash – Any motor vehicle or other road vehicle crash that results in fatal injuries to one or more persons.

FAUB – (Federal-Aid Urban Boundary) the line that divides Urban Area from Rural Area.

Fixed Object or Other Object Collision – A fixed or other object collision results when one vehicle strikes a fixed or other object on the roadway or off roadway. An event code should be coded describing what was hit.

Frontage road – A road, secondary to and generally parallel to a highway, providing service to abutting property and adjacent areas for control of access. A frontage road may or may not be connected to the highway it services.

Gore – A gore is the area inside the triangular space that divides a ramp exit or entrance from the mainline roadway. Its purpose is to provide recovery room for a vehicle and it will also be where one would find an impact attenuating device.

Head-On Collision – A head-on type of collision results when the drivers of two vehicles traveling in opposite directions on parallel paths attempt to occupy the same position at the same time and find their forward movement impeded. It is not necessary for the vehicles to collide head-on; that is, for each to be struck perpendicularly to the front of the car. It is the alteration of the intended path of travel that defines the type of collision. To conform with the definition, any attempted maneuver to avoid the collision is inconsequential to the complete crash.

Glossary

(Continued)

Impact attenuator – You may see a plastic barrel filled with water referred to as a "water bumper" as an attenuation device. They are what is now referred to as "crash cushions". Their intent is to divert and decelerate impacts of vehicles from striking more rigid objects, to reduce the crash severity of hitting other objects, Hence a kind of "crash cushion". They are meant to prevent heavy impacts with guardrail ends or concrete median ends which do not move and cause much more severe damage to a vehicle.

Incorporated City – One that has been approved by an election, held in accordance with Statute (ORS Chapter 221).

Jiggle bar – This refers to a raised generally painted channelization barrier. i.e., (raised ////////////) in the roadway that is intended to distinctly separate traffic without the construction of a solid traffic island or solid median barrier. They appear as a series or group of painted bumps placed in a line or v-formation, separating roadways hence channelizing traffic onto or away from another roadway.

Locals – Provide land access to roads which are lower volume roadways that provide direct land access but are not designed to serve through traffic needs focusing on land access and relatively short trips and include all other public roads.

Mainline – The mainline portion of the highway refers to all roadways for a highway, excluding connections, frontage roads, and couplets. (This is a slight variation to the way mainline is defined by ODOT terms and definitions, for the purposes of coding for the Crash Analysis and Reporting Unit (CAR)).

Miscellaneous Collisions – Miscellaneous collisions include all animal crashes except animals drawing vehicles, and all crashes *not* classifiable under the above types. Typical crashes included – hitting a wild or domestic animal, lost load, or drive shaft fell from vehicle.

Motor Vehicle in Transport – per ANSI D16.1-2007, definition 2.2.34 (**revised**): When applied to motor vehicles, "in transport" means **on a roadway or in motion within or outside the trafficway**. This includes driverless motor vehicles that are in motion, motionless motor vehicles that are within the travel portion of the roadway, disabled vehicles on a roadway, and others.

Non-Collision – A non-collision crash is one in which only one vehicle is involved and is not classifiable as another collision; i.e. rollover, etc.

Non-Fatal Injury Crash – A motor vehicle crash that results in any injury, not resulting in death, to one or more persons.

Overlapping Mileage – A new overlapping length of roadway on an already existing milepointed section of road. This occurs when a road must be lengthened, other than at the end, and additional mileage has been added.

Parking Maneuver Collision – A parking maneuver collision results when a vehicle in the act of

Glossary

(Continued)

entering or leaving a parked position is involved in a collision. A parking maneuver continues until the vehicle has completely cleared the parked position and is moving in the traffic lane. The reverse is true for a vehicle entering a parked position.

Participant – A person involved in the crash who was a driver, injured passenger, child passenger age 0 to 4 (whether injured or un-injured), or a non-motorist who was struck, such as a pedestrian, pedal-cyclist, occupant of a non-motorized transport device etc. Records are not created in the Crash Data System for un-injured passengers or non-motorists who were involved in the crash occurrence but not struck.

Pedestrian Collision – A pedestrian collision results when the first harmful event is any impact between a motor vehicle in traffic and a pedestrian. Does not include any crash where a pedestrian is injured after the initial vehicle impact. In this case, the first harmful event would be the collision type (i.e. rear-end collision) with the pedestrian being coded as a supplemental event to the crash.

Per PAR – When this phrase is used, it means that the officer is stating his or her opinion and not just documenting a witness statement.

Posted Speed – The maximum speed that you may travel on the road. It begins where a black on white speed sign is posted and ends where a different black on white speed sign is posted.

Property Damage Only Collision – Any motor vehicle crash in which there is no injury to any person, but only damage to a motor vehicle or other road vehicle or to other property, including injury to domestic animals.

Rear-End Collision – A rear end collision results when a vehicle traveling in the same direction or parallel on the same path as another vehicle, collides with the rear end or a second vehicle. In this type, the direction of travel was parallel but continuous.

Regular Mileage – The majority of the highway system is coded as regular mileage. This means that the roadway is "normal".

Reverse Direction (non-add) – The opposite of add mileage where the direction of travel in which mileposts decrease. The Pacific Highway 1, Interstate 5, is the only exception in that the non-add mileage is accumulated in the direction of increasing milepoints.

Road rage is defined as *"an assault with a motor vehicle or other dangerous weapon by the operator or passenger(s) of another motor vehicle, or an assault precipitated by an incident that occurred on a roadway." (USDOT, National Highway Traffic Safety Administration, retrieved from https://one.nhtsa.gov/people/injury/research/aggressionwisc/chapter_1.htm)*

Roadway – A part of a trafficway designed, improved, and ordinarily used for vehicular travel. The Crash Data Technician considers the boundary lines to be the lateral limits of the traffic lanes. Thus,

parking lanes and shoulders are NOT part of the roadway. Also, a parking lane ceases to exist and is considered a traffic lane when parking along a street is prohibited continuously, or during hours the parking lane is required to be clear for traffic.

Rural Major Collectors – A link county seats and communities not served by arterials but have an intra-county rather than statewide focus.

Rural Minor Arterials – Also focus on mobility but typically link smaller cities and towns and other statewide traffic generators, such as resorts that are not served by principal arterials.

Rural Minor Collectors – Collect traffic from local roads and smaller communities.

Rural Principal Arterials – Focus on statewide and interstate mobility and typically include the Interstate System and other rural freeways that serve longer distance high-volume corridors.

Sideswipe-Meeting Collision – A side swipe meeting collision results when vehicles traveling in opposite directions on parallel paths collide. The side of at least one of the vehicles must be involved.

Sideswipe-Overtaking Collision – A side swipe overtaking collision results when vehicles traveling in the same direction on parallel paths collide. The side of at least one of the vehicles must be involved.

Split roadways – Alignments (lanes) that run parallel to regular add on non-add alignments on a state highway, which are part of the same highway, but are separated by a physical divider. This roadway type is limited and the identifying code distinguishing this roadway from others will be gradually phased out of use by the Roadway Inventory and Classification Unit Services (RICS).
"Split roadways" were terminated in the Trans-Info highway inventory as of 01/01/2010.

Spur Mileage – A spur is an off shoot of the "normal" highway alignment. It may be a two-way or one-way roadway. An example of a spur is Grants Pass Parkway in the City of Grants Pass. This spur runs eastbound off the "normal" route for OR 99, Highway 25.

State Highway – A land-based public way designated by the Oregon Transportation Commission as a highway for the purpose of vehicular travel. The State of Oregon commonly has, but may not have all, right, title, interest, jurisdiction, maintenance and control of the entire area with the highway right-of-way.

Temporary Mileage – A highway route that is a temporary alignment at the time. These alignments will be identified in the highway references and they have no distinguishing difference from a "normal" route other than their expected length of service.

Turning Leg – A configuration recognized in crash coding, is a travel lane for channelizing traffic at right-angles most commonly found at an intersection. (Not to be mistaken for a right turn lane.) A common form of turning leg is noted by a triangular shaped island, raised curb, or painted, that separates right-turning traffic from through traffic at an intersection.

Glossary

(Continued)

Turning Movement Collision – A turning movement collision results when one or more vehicles in the act of a turning maneuver is involved in a collision with another vehicle.

Two-way Highway – Both directions of travel on the same roadway are separated by 4 feet or less.

Urban Collectors – Focus on mobility and land access by serving both intra-urban and local trips that take travelers to arterials.

Urban Minor Arterials – Focus on mobility but serve shorter trips between traffic generators within urban areas.

Urban Principal Arterials – Focus on mobility by serving trips through urban areas and long distance trips between traffic generators within an urban area.

Deliberate Intent

Do not code crashes that result from deliberate intent, when injury or damage is not greater than what was intended.

According to the ANSI D16.1-2007 *Manual on Classification of Motor Vehicle Traffic Accidents,* definition 2.4.2., deliberate intent is "the classification given to the cause of an event which occurs when a person acts deliberately to cause the event or deliberately refrains from prudent acts which would prevent occurrence of the event."

Inclusions:

- Suicide
- Self-inflicted injury
- Homicide
- Injury or damage purposely inflicted
- And others

Exclusions:

- Injury or damage beyond that which was intended
- And others

Examples of Deliberate Intent:

1. When a driver intentionally kills or injures himself with a motor vehicle, by driving it against a fixed object or into a body of water.
2. When a driver intentionally kills or injures another person with a motor vehicle, by running into a pedestrian.
3. When a driver intentionally causes damage with a motor vehicle, by ramming another vehicle.

When to code crashes involving Deliberate Intent:

If an intentional act to cause injury or damage results in injury or damage beyond that reasonably expected from the act, the unexpected injury or damage is not the result of deliberate intent. Therefore, the resulting crash should be coded.

Examples of injury or damage beyond what was intended:

1. A driver intentionally drives his vehicle over the side of a bridge, plunging to the highway below and lands on another vehicle. Do not code the first incident, but do code the collateral crash involving the second vehicle.
2. A driver tries to deliberately run another vehicle off the road, and loses control of his own vehicle, crashing into the ditch.

Legal Intervention

According to the ANSI D16.1-2007 *Manual on Classification of Motor Vehicle Traffic Accidents,* definition 2.4.3., legal intervention is "a category of deliberate intent in which the person who acts or refrains from acting is a law-enforcing agent or other official".

Examples:

1. If a lawbreaker crashes either intentionally or unintentionally into a road block set up by police to stop him, the crash is considered a result of legal intervention. If a driver other than the lawbreaker crashes into the road block, the crash is not considered to be a result of legal intervention.

2. If a police car is intentionally driven into another vehicle, the crash is considered to result from legal intervention. If a lawbreaker being pursued by the police loses control of his vehicle and crashes, the crash is not considered to result from legal intervention unless the police intended that the lawbreaker crash.

3. If during the course of the pursuit, the police vehicle strikes a road vehicle other than the subject of the pursuit, a non-motorist, or property, then that harmful event is not legal intervention.

When to code crashes involving Legal Intervention:

- A driver other than a lawbreaker unintentionally crashes into a roadblock
- A lawbreaker, while eluding the police, loses control of his vehicle and crashes into another vehicle
- A police car skids and crashes while chasing a lawbreaker
- And others

Unstabilized Situation

According to the *ANSI D16.1-2007 Manual on Classification of Motor Vehicle Traffic Accidents, definition 2.4.4.*, an unstabilized situation is *"a set of events not under human control. It originates when control is lost and terminates when control is regained or, in the absence of persons who are able to regain control, when all persons and property are at rest".*

If thorough investigation fails to establish whether an accident scene is the result of one or more unstabilized situations, then it should be treated as a single unstabilized situation.

Examples:

1. If intentional acts cause injury or damage beyond that reasonably to be expected from the acts, the unexpected injury or damage is not the result of deliberate intent. There is therefore, an unstabilized situation unless the contrary can be clearly established.

2. In a motor vehicle crash live electric wires fall on a motor vehicle, but there is no injury from the electric current while the occupants remain in the motor vehicle. The unstabilized situation ends with the occupants in a temporary position of safety. Any subsequent injury resulting from attempts by the occupants to leave the motor vehicle, or attempts by others to rescue the occupants is a part of a new unstabilized situation.

3. In a motor vehicle crash the occupants of the motor vehicle are carried or thrown into water, but there is no injury from the submersion and the occupants reach a temporary position of safety. At this point the unstabilized situation has ended. Any subsequent injury from attempts by the occupants to reach shore or from attempts by others to rescue the occupants is part of a new unstabilized situation.

4. In a motor vehicle crash objects are loosened by remain in place until all persons are removed from danger from objects that might fall or roll. No property damage would result if the objects fell or rolled. This ends the unstabilized situation. Any subsequent injury attributable to the fall or roll of the loosened objects is not part of the original unstabilized situation.

5. In a motor vehicle crash the motor vehicle catches on fire and is burning, but all occupants have been rescued and the fire is under control. No additional property damage is expected. This is the end of the unstabilized situation. If the heat of the fire ignites nearby combustible materials, any subsequent injury or damage from the induced ignition is not a part of the original unstabilized situation.

6. In a motor vehicle crash an involved motor vehicle carrying explosive materials is stopped and occupants and bystanders are removed from the scene. At this point the unstabilized situation is ended. If the explosive materials detonate during later attempts to remove or salvage them, any injury or damage resulting from the explosion is not a part of the original unstabilized situation.

Unstabilized Situation

(Continued)

7. A pedestrian is struck by a motor vehicle in transport which leaves the scene. The pedestrian comes to rest in the roadway. Any subsequent injury resulting from contact with another motor vehicle in transport is part of a new unstabilized situation.
8. A pedestrian is struck by a motor vehicle and thrown into the path of another motor vehicle and the pedestrian is struck a second time before coming to rest. There is only one unstabilized situation.

9. A motor vehicle in transport brakes, attempting to avoid a pedestrian crossing the roadway. The motor vehicle in transport strikes the pedestrian. At the same time (i.e., when the first vehicle started to brake and before it came to rest), a second motor vehicle in transport swerved to avoid a collision with the braking vehicle, striking a utility pole. The two motor vehicles in transport do not strike each other, but these events are all within one unstabilized situation.

Validation Rules

Notes on validation messages:

Standard messages are frequently used, with substitutions made as needed to display the applicable programmed screen field names (in the case of missing data) database table and column names (in the case of database lookups that don't find a match) and specific field values. When a message includes a screen field name such as "SerialNumber", "CrashDay", "CrashYear", etc., the programmed screen field name is what is being displayed. These are not spelling errors. Field names cannot contain spaces.

When a message shown in this document includes a value such as **"99"**, the actual input value is substituted in the message in place of the "99" to give the user as much information as possible on the exact error condition encountered.

Rule Sequence

Rules are presented in the same general order as the fields are entered on the screen. However, error / warning messages do not display until the crash is validated.

Crash Data

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
001	1985	Serial Number is "null"	Field required	Required field Serial Number missing	Serial Number
098	1985	Serial Number is not "null"	Value entered must be numeric	When entered, Serial Number must be numeric	Serial Number
2001	1985	Serial Number is not null AND County ID is not null AND Crash Year is not "null" AND you are working in a Preliminary Crash table (on either the primary or the local database)	Combination of Serial Number / County / Year must not be the same as the values in another crash in the Preliminary Crash table on whichever database you are currently using (Primary or Local)	A crash already exists with this serial number, county and year value	Serial Number Crash Year County ID

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
2002	1985	Serial Number is not “null” AND County ID is not “null” AND Crash Year is not “null” AND you are working in the primary database	Combination of Serial Number / County / Year must not be the same as the values in another Crash in the Reportable Crash table in the Primary database	A crash already exists with this serial number, county and year value	Serial Number Crash Year County ID
004	1985	Crash Month is “null”	Field required	Required field Crash Month missing	Crash Month
006	1985	Crash Month is not “null”	Value must be in list: “01-12”	Crash month must be a valid month number (01-12)	Crash Month
003	1985	Crash Day is “null”	Field required	Required field Crash Day missing	Crash Day
005	1985	Crash Year is “null”	Field required	Required field Crash Year missing	Crash Year
008	1985	Crash Year is not “null”	Value must be >= “1985”	Year value must be at least 1985	Crash Year
007	1985	Crash Month is not “null” AND Crash Day is not “null “AND Crash Year is not “null”	Combination of three fields must be a valid date	Combination of month, day and year do not represent a valid date	Crash Month Crash Day Crash Year
009	1985	Crash Month is not “null” AND Crash Day is not “null “AND Crash Year is not “null”	Combination of three fields must be a date that is <= “current date”	Future date value invalid	Crash Month Crash Day Crash Year

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
082	1985	Road Character Code <> “9” AND Crash Hour is not “null” AND Light Condition Code is not “null” AND Crash Month is not “null”	Combination of Crash Hour, Light Condition and Crash Month must be in the Crash Hour - Light Condition cross-reference table where the entry is valid as of the crash date	Combination of Crash Hour, Light Condition and Crash Month not found on the cross-reference table	Crash Month Crash Hour Light Condition
083	1985	Road Character Code <> “9” AND Crash Hour is not “null” AND Light Condition Code is not “null” AND Crash Month is not “null”	Combination of Crash Hour, Light Condition and Crash Month must be in the Crash Hour - Light Condition cross-reference table where the entry is valid as of the crash date and the Validity Indicator on the entry is "W".	Warning - please review combination of Crash Hour, Light Condition and Crash Month	Crash Month Crash Hour Light Condition
099	1985	Crash Hour is “null”	Field required	Required field CrashHourNo missing	Crash Hour
100	1985	Crash Hour is not “null”	Value entered must be on Crash Hour lookup table where the entry is valid as of the crash date.	CRASH_HR_NO = “99” was not found in CRASH_HR or is not valid as of the crash date	Crash Hour
010	1985	County ID is “null”	Field required	Required field County ID missing	County
011	1985	County ID is not “null”	Value entered must be on County lookup table, where the entry is valid as of the crash date	CNTY_ID = “99” was not found in CNTY or is not valid as of the crash date	County

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
024	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null” AND County ID is not “null”	County value entered must match County value on HWY_SEG_HIST table for this highway segment for the Crash Year	County value entered doesn't match County value for this highway / milepoint for this year in ITIS	County
012	1985	City Section ID is not “null”	Value entered must be in City lookup table, where the entry is valid as of the crash date.	CITY_SECT_ID = “999” was not found in CITY_SECT or is not valid as of the crash date	City
101	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null”	City value entered must match City value on HWY_SEG_HIST table for this highway segment for the crash year	City value entered doesn't match City value for this highway / milepoint for this year in ITIS	City Section
013	1985	City Section ID is not “null” AND County ID is not “null”	Combination of City Section ID and County ID must exist on City-County Xref table, where the entry is valid as of the crash date	Combination of CITY_SECT_ID = ‘999’ and CNTY_ID = “99” not valid in the CITY_SECT__CNTY cross-reference table	City County
014	1985	Urban Area Code is not “null”	Value must be in Urban Area lookup table, where the entry is valid as of the crash date	URB_AREA_CD = “99” was not found in URB_AREA or is not valid as of the crash date	Urban Area

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
017	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null”	Urban Area value entered must match Urban Area value on HWY_SEG_HIST table for this highway segment for the Crash Year	Urban area value entered doesn't match urban area value for this highway / milepoint for this year in ITIS	Urban Area
015	1985	Urban Area Code is not “null” AND County ID is not “null”	Combination of Urban Area Code and County ID must exist on Urban Area – County XREF table, where the entry is valid as of the crash date	Combination of CNTY_ID = “99” and URB_AREA_CD = “99” not valid in URB_AREA__CNTY cross-reference table	Urban Area County
016	1985	Urban Area Code is not “null” AND City Section ID is not “null”	Combination of Urban Area Code and City Section ID must exist on Urban Area – City Section XREF table, where the entry is valid as of the crash date.	Combination of CITY_SECT_ID = “999” and URB_AREA_CD = “99” not valid in the URB_AREA__CITY_SECT cross-reference table	Urban Area City
018	1997	Functional Class is “null”	Field Required	Required field FunctionalClassificationId missing	Functional Class
019	1985	Functional Class is not “null”	Value must be in Functional Class lookup table where the entry is valid as of the crash date	Functional Class not in lookup table or not valid as of crash date.	Functional Class

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
020	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null” AND Functional Class is not “null”	Functional Class value entered must match Functional Class value on HWY_SEG_HIST table for this highway segment for the Crash Year	Functional Class value entered doesn't match functional class value for this highway / milepoint for this year in ITIS	Functional Class
095	1997	Functional Classification Code is < “10”	Urban Area Code must be “null”	Urban Area value indicates urban area but Functional Class value indicates rural area	Functional Class Urban Area
096	1997	Functional Classification Code is > “09” and Urban Area Code is “null”	Urban Area Code is required	Urban Area value indicates rural area but Functional Class value indicates urban area	Functional Class Urban Area
022	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null”	NHS value entered must match NHS value on HWY_SEG_HIST table for this highway segment for this year	NHS value entered doesn't match NHS value for this highway / milepoint for this year in ITIS	NHS Flag
115	1985	NHS Flag is not “null”	Value entered must be “0” or “1”	NationalHwySystemFlag value must be “1” for Yes or “0” for No	NHS Flag

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
023	1985	Highway Number is not “null”	Highway Number value entered must be in the Highway History lookup table where the entry is valid as of the crash date	HWY_NO = “999” was not found in HWY_HIST or is not valid as of the crash date	Highway Number
025	1985	Roadway Number is not “null”	Roadway Number value entered must be in the Roadway lookup table where the entry is valid as of the crash date	RDWY_NO = “9” was not found in RDWY_NO or is not valid as of the crash date	Roadway Number
026	1985	Highway Number is “null”	Roadway Number must be “null”	Roadway Number must be “null” when the Highway Number is “null”	Roadway Number
102	1985	Highway Number is not “null”	Roadway Number is required	Roadway Number is required when Highway Number is entered	Roadway Number
027	1985	Highway Component Code is not “null”	Value entered must be in the Highway Component lookup table where the entry is valid as of the crash date	HWY_COMPNT_CD = “9” was not found in HWY_COMPNT or is not valid as of the crash date	Highway Component
028	1985	Highway Number is “null”	Highway Component must be “null”	Highway Component Code must be null when the Highway Number is “null”	Highway Component
033	1985	Road Connection Number is not “null”	Highway Component must equal “6”	Highway Component must be “6” if a Road Connection value is specified	Highway Component
103	1985	Highway Number is not “null”	Highway Component is required	Highway Component is required when Highway Number is entered	Highway Component

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
029	1985	Mileage Type Code is not “null”	Value entered must be in the Mileage Type lookup table where the entry is valid as of the crash date	MLGE_TYP_CD = “9” was not found in MLGE_TYP or is not valid as of the crash date	Mileage Type
030	1985	Highway Number is “null”	Mileage Type Code must be “null”	Mileage Type Code must be “null” when the Highway Number is “null”	Mileage Type
031	2003	Crash Year is not “null” AND Highway Number is not “null” AND Roadway Number is not “null” AND Mileage Type is not “null” AND Milepoint Number is not “null”	Mileage Type value entered must match Mileage Type value on HWY_SEG_HIST table for this highway segment for the Crash Year	Mileage Type value entered doesn’t match Mileage Type value for this highway / milepoint for this year in ITIS	Mileage Type
104	1985	Highway Number is not “null”	Mileage Type Code is required	Mileage Type Code is required when Highway Number is entered	Mileage Type
032	1985	Road Connection Number is not “null”	Value must be numeric	When entered, Road Connection Number must be numeric	Connection Number
105	1985	Latitude Degrees is not “null”	Value entered must be between “41” and “47” inclusive	When entered, Latitude Degrees must be a whole number between “41” and “47”, inclusive	Latitude Degrees
106	1985	Latitude Minutes is not “null”	Value entered must be between “0” and “60” inclusive	When entered, Latitude Minutes must be a whole number between “0” and “60”, inclusive	Latitude Minutes
125	1985	Latitude Degrees is “null”	Latitude Minutes must be “null”	Latitude Minutes must be “null” when Latitude Degrees is “null”	Latitude Minutes
107	1985	Latitude Seconds is not “null”	Value entered must be between “0.00” and “60.00” inclusive.	When entered, Latitude Seconds must be a numeric value between “0.00” and “60.00”, inclusive	Latitude Seconds
126	1985	Latitude Degrees is “null”	Latitude Seconds must be “null”	Latitude Seconds must be “null” when Latitude Degrees is “null”	Latitude Seconds

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
108	1985	Longitude Degrees is not “null”	Value entered must be between “-123” and “-117” inclusive. (Note: positive values entered are automatically converted to negative before value is stored.)	When entered, Longitude Degrees must be a whole number between “123” and “117” inclusive, or between “-123” and “-117” inclusive	Longitude Degrees
109	1985	Longitude Minutes is not “null”	Value entered must be between “0” and “60” inclusive	When entered, Longitude Minutes must be a whole number between “0” and “60”, inclusive	Longitude Minutes
127	1985	Longitude Degrees is “null”	Longitude Minutes must be “null”	Longitude Minutes must be “null” when Longitude Degrees is “null”	Longitude Minutes
110	1985	Longitude Seconds is not “null”	Value entered must be between “0.00” and “60.00” inclusive.	When entered, Longitude Seconds must be a numeric value between “0.00” and “60.00”, inclusive	Longitude Seconds
128	1985	Longitude Degrees is “null”	Longitude Seconds must be “null”	Longitude Seconds must be “null” when Longitude Degrees is “null”	Longitude Seconds
034	1985	Special Jurisdiction ID is not “null”	Value entered must be in the Special Jurisdiction lookup table where the entry is valid as of the crash date	SPECL_JRSDCT_ID = “99” was not found in SPECL_JRSDCT or is not valid as of the crash date	Special Jurisdiction
137	1985	County is not blank and Special Jurisdiction is not “blank”	The combination of County ID and Special Jurisdiction ID must be in the cross-reference table	Combination of CNTY_ID = “99” and SPECL_JRSDCT_ID = “99” not valid in the SPECL_JRSDCT__CNTY cross-reference table	Special Jurisdiction County

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
036	2002	(County <> “26” or City < “241”) AND Road Character = “1” AND Highway Component <> “6” AND Street <> “” AND Intersecting Street <> “” AND Intersecting Street <> “00000” AND Street <= “99999” AND Intersecting Street <= “99999”	Street # must be < = Intersecting St #	First street number must be less than the intersecting street number	Street Number Intersecting Street
136	1985	Highway is “blank” and Street is “blank” and Recreational Road is “blank”	Street or Highway or Recreational Road must be present	Either a Highway, Street or Recreational Road must be specified	Street Number
039	1985	Road Character = “1” AND Milepoint Number is null	Distance from Intersection must be “zero”	Distance from Intersection must = “0” when Road Character = “1”	Distance from Intersection
040	1985	Compass Direction Code is “null”	Value required	Required field Compass Direction Code missing	Direction from Intersection
041	1985	Compass Direction Code is not “null”	Value entered must be in Compass Direction lookup table where the entry is valid as of the crash date	CMPSS_DIR_CD was not found in CMPSS_DRCT or is not valid as of the crash date	Direction from Intersection
042	1985	Road Character = “1” AND Impact Location Code <= “04”	Direction from Intersection must = “9”	When Road Character = “1” and Impact Location Code <=”04” then Direction from Intersection must = “9”	Direction from Intersection

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
043	1985	Highway Number is “null” AND City Section ID is not “null” AND Impact Location Code > “04”	Direction from Intersection must be < “9”	When Impact Location Code > ”04” and Highway No. is “null” and City ID is not “null”, then Direction from Intersection must be < “9”	Direction from Intersection
044	1985	Milepoint Number is not “null”	Milepoint Number must be numeric.	When entered, Milepoint Number must be numeric	Milepoint
131	1985	Milepoint Number is not “null”	Milepoint Number must be <= “999.99”	When entered, the milepoint value must be <= “999.99”	Milepoint
133	1985	Highway Number is not “null”	Milepoint Number must be present	Milepoint is required when Highway Number is entered	Milepoint
130	2003	Crash Year is not “null” AND Highway Number is not “null” AND Milepoint Number is not “null”	Milepoint value entered must exist on HWY_SEG_HIST table for this highway for the Crash Year	Milepoint value not valid for the specified Highway in the specified Crash Year according to ITIS	Milepoint
045	1985	Posted Speed Limit Value is not “null”	Value must be < “70”	When entered, Posted Speed Limit value must be < “70”	Posted Speed Limit
046	1985	Road Character Code is “null”	Field Required	Required field Road Character Code missing	Road Character
047	1985	Road Character Code is not “null”	Value entered must be in Road Character lookup table where the entry is valid as of the crash date	RD_CHAR_CD = “9” was not found in RD_CHAR or is not valid as of the crash date	Road Character
049	1985	Off Roadway Flag is not “null”	Value entered must be “0” or “1”.	Off Roadway Flag value must be “1” for Yes or “0” for No	Off Road Flag
113	1985	Off Roadway Flag is “null”	Field Required	Required field Off Roadway Flag missing	Off Road Flag

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
050	1985	Intersection Type Code is not “null”	Value entered must be in the Intersection Type lookup table where the entry is valid as of the crash date	ISECT_TYP_CD = “9” was not found in ISECT or is not valid as of the crash date	Intersection Type
051	1985	Road Character Code <> “1”	Intersection Type must be null	Intersection Type Code must be null when the Road Character does not indicate Intersection (“1”)	Intersection Type
053	1985	Road Character Code = “1”	Intersection Related Flag must = “0”	Intersection Related Flag must be “0” when Road Character = “1”	Intersection Related Flag
116	1985	Intersection Related Flag is not “null”	Value entered must be “0” or “1”	Intersection Related Flag value must be “1” for Yes or “0” for No	Intersection Related Flag
117	1985	Roundabout Flag is not “null”	Value entered must be “0” or “1”	Roud About Flag value must be “1” for Yes or “0” for No	Roundabout Flag
118	1985	Driveway Involved Flag is not “null”	Value entered must be “0” or “1”	DrivewayRelatedFlag value must be “1” for Yes or “0” for No	Driveway Involved Flag
056	1985	Road Character Code = “1”	Number of Lanes must be “null”	Number of Lanes must be “null” when Road Character indicates Intersection (1)	Number of Lanes
057	1985	Road Character Code <> “1”	Number of Lanes must be numeric	Number of Lanes must be specified (numeric value) when Road Character is something other than Intersection (1)	Number of Lanes
059	1985	Road Character Code = “1” and Driveway Related Flag <>”1”	Number of Turning Legs must be numeric	Number of Legs must be numeric when Road Character is Intersection (1)	Number of Turning Legs

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
114	1985	Road Character Code <> “1” AND Turning Legs Quantity is not “null” AND Turning Legs Quantity <> “0”	Number of Turning Legs must be “null”	Number of Legs must be “null” or “zero” when Road Character is something other than Intersection (1)	Number of Turning Legs
060	1985	Road Character Code = “1”	Median Type Code must be “null”	Median Type Code must be “null” when Road Character indicates Intersection (1)	Median Type
061	1985	Median Type Code is not null AND Road Character Code <> “1”	Value entered must be in Median Type lookup table and must be valid as of the crash date	MEDN_TYP_CD = “9” was not found in MEDN_TYP or is not valid as of the crash date	Median Type
129	1985	Road Character Code <> “1” AND Median Type is null	Median Type is required	Median Type Code is required when Road Character <> “1” (Intersection)	Median Type
062	1985	Impact Location Code is not “null”	Value entered must be in the lookup table where the entry is valid as of the crash date	IMPCT_LOC_CD = “99” was not found in IMPCT_LOC or is not valid as of the crash date	Location of Impact
063	1985	Highway Number is not “null”	Impact Location Code must be <= “14”	When Highway Number is entered, Impact Location Code must be a numeric value <=”14”	Location of Impact
064	1985	Highway Number is not “null” AND City Section ID is not “null” AND City Section ID > “0”	Impact Location Code must be <= “9”	When Highway Number is not entered but City Identifier is entered, Impact Location code must be a numeric value <=”9”	Location of Impact
065	1985	(City Section ID is null or City Section ID = “0”) AND Highway Number is null AND Road Character Code <> “1”	Impact Location Code must <=” 7”	When Highway Number is not entered and City Identifier is not entered, Impact Location code must be a numeric value <=”7”	Location of Impact

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
134	1985	City Section ID is “null” AND Highway Number is “null” AND Road Character Code = “1” AND Turning Legs Quantity = “0”	Impact Location must be <= “7”	When not on a highway and not in a city, and not at an intersection with turning legs, Impact Location code must be <=”7”	Location of Impact
135	1985	City Section ID is “null” AND Highway Number is “null” AND Road Character Code = “1” AND Turning Legs Quantity > 0	Impact Location must be <= “9”	When not on a highway and not in a city, but it is at an intersection with turning legs, Impact Location Code must be <=”9”	Location of Impact
066	1985	Crash Type Code is “null”	Field required	Required field Crash Type Code missing	Crash Type
067	1985	Crash Type Code is not “null”	Value entered must be in the Crash Type lookup table where the entry is valid as of the crash date	CRASH_TYP_CD = “9” was not found in CRASH_TYP or is not valid as of the crash date	Crash Type
089	2002	Crash Type Code = “4”	One of Crash-level Event code values must be “15” or “16”	When Crash Type Code = “4” (Train), one of Crash-level Event code values must be “15” or “16”	Crash Type
090	2002	Crash Type Code = “4”	At least one Vehicle on this Crash must have a Vehicle-level Event Code value of “17”, “18”, or “19”	If Crash Type Code = “4” (Train), at least one vehicle on this crash must have a Vehicle-level Event Code value of “17”, “18”, or “19”	Crash Type
091	1985	Crash Type Code = “8”	At least one Vehicle on this Crash must have a Vehicle-level Event Code value that is between “37” and “66”, or between “77” and “79”, or be = “88”, or be = “100”	When Crash Type Code = “8” (Fixed Object), at least one Vehicle on this crash must have a Vehicle-level Event Code value that is between “37” and “66”, or between “77” and “79”, or be = “88”, or be = “100”	Crash Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
132	1985	Count of Vehicles Coded < “2”	At least two vehicles must be coded when the crash type indicates a multiple-vehicle crash	At least two vehicles must be coded when the crash type is “1, 2, A, B, C, D, E, F, G, H, I or J”	Crash Type
649	1985	Crash Type Code = “3”	None of the Participant Event Codes can be “05” (sub-ped)	If Crash Type Code = “3” (Pedestrian) then none of the Participant Event Codes can be “05” (sub-ped)	Crash Type [Participant Event]
068	1985	Collision Type Code is “null”	Field Required	Required field Collision Type Code missing	Collision Type
069	1985	Collision Type Code is not “null”	Value entered must be in the Collision Type lookup table where the entry is valid as of the crash date	COLLIS_TYP_CD = “9” was not found in COLLIS_TYP or is not valid as of the crash date	Collision Type
070	1985	Collision Type Code is not “null” AND Crash Type Code is not “null”	Combination of Collision Type Code and Crash Type Code must be in the Collision Type - Crash Type cross-reference table where the entry is valid as of the crash date	Combination of COLLIS_TYP_CD = “9” and CRASH_TYP_CD = “9” not valid in the CRASH_COLLIS_TYP_XREF cross-reference table	Collision Type Crash Type
071	1985	Collision Type Code is not “null “AND Crash Type Code is not “null”	Combination of Collision Type Code and Crash Type Code exists in the Collision Type - Crash Type cross-reference table where the entry is valid as of the crash date and the Validity Indicator on the entry is "W"	Warning – combination of COLLIS_TYP_CD = “9” and CRASH_TYP_CD = “9” must be confirmed, please review	Collision Type Crash Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
072	1985	Crash Severity Code is “null”	Field required	Required field Crash Severity Code missing	Crash Severity
073	1985	Crash Severity Code is not “null”	Value entered must be in the Crash Severity lookup table where the entry is valid as of the crash date	CRASH_SVRTY_CD = “9” was not found in CRASH_SVRTY or is not valid as of the crash date	Crash Severity
627	1985	Crash Severity Code = “2”	At least one Participant must be coded with an Injury Severity Code Value of “1”	Crash Severity indicates Fatal Crash, but no Participant was coded with a fatal injury	Crash Severity
629	1985	Crash Severity Code = “4”	At least one Participant must be coded with an Injury Severity Code Value of (“2”, “3”, or “4”)	Crash Severity indicates at least one Participant was injured, but no Participant was coded with an injury	Crash Severity
074	1985	Weather Condition Code is “null”	Field required	Required field Weather Condition Code missing	Weather Condition
075	1985	Weather Condition Code is not “null”	Value entered must be in the Weather Condition lookup table where the entry is valid as of the crash date	WTHR_COND_CD = “9” was not found in WTHR_COND or is not valid as of the crash date	Weather Condition
076	1985	Road Surface Condition Code is “null”	Field required	Required field Road Surface Condition Code missing	Road Surface Condition
077	1985	Road Surface Condition Code is not “null”	Value entered must be in the Road Surface Condition lookup table where the entry is valid as of the crash date	RD_SURF_COND_CD = “9” was not found in RD_SURF_COND or is not valid as of the crash date	Road Surface Condition

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
078	1985	Weather Condition Code is not “null” AND Road Surface Condition Code is not “null”	Combination of Weather Condition Code and Road Surface Condition Code must be in the Weather Condition - Road Surface Condition cross-reference table where the entry is valid as of the crash date	Combination of WTHR_COND_CD = “9” and RD_SURF_COND_CD = “9” not valid in the RD_SURF_WTHR_COND_XREF cross-reference table	Road Surface Condition Weather Condition
079	1985	Weather Condition Code is not “null“ AND Road Surface Condition Code is not “null”	Combination of Weather Condition Code and Road Surface Condition Code must be in the Weather Condition - Road Surface Condition cross-reference table where the entry is valid as of the crash date and the Validity Indicator on the entry is "W"	Warning – combination of WTHR_COND_CD = “9” and RD_SURF_COND_CD = “9” must be confirmed. Please review	Road Surface Condition Weather Condition
080	1985	Light Condition Code is “null”	Field Required	Required field Light Condition Code missing	Light Condition
081	1985	Light Condition Code is not “null”	Value entered must be in the Light Condition lookup table where the entry is valid as of the crash date	LGT_COND_CD = “9” was not found in LGT_COND or is not valid as of the crash date	Light Condition
084	1985	Traffic Control Device Code is “null”	Field Required	Required field Traffic Control Device Code missing	Traffic Control Device

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
085	1985	Traffic Control Device Code is not “null”	Value entered must be in the Traffic Control Device lookup table where the entry is valid as of the crash date	TRAF_CNTL_DEVICE_CD = “9” was not found in TRAF_CNTL_DEVICE or is not valid as of the crash date	Traffic Control Device
119	1985	Traffic Control Functional Flag is not “null”	Value entered must be “0” or “1”	TrafficControlFunctionalFlag value must be “1” for Yes or “0” for No	Traffic Control Functional Flag
087	1985	Investigating Agency Code is not “null”	Value entered must be in the Investigating Agency lookup table where the entry is valid as of the crash date	INVSTG_AGY_CD = “9” was not found in INVSTG_AGY or is not valid as of the crash date	Investigative Agency
092	1985	At least one Cause Code has been entered at the Crash level	For each Crash-level cause code entered: Value entered must be on the Cause lookup table where the entry is valid as of the crash date and the entry is valid for use at the Crash level	CAUSE_CD = “99” was not found in CAUSE or is not valid for use as of the crash date, or is not valid for use at this level	Crash Cause (1) Crash Cause (2) Crash Cause (3)
088	1985	At least one Event Code has been entered at the Crash level	For each Crash-level event code entered: Value entered must be on the Event lookup table where the entry is valid as of the crash date and the entry is valid for use at the Crash level	EVNT_CD = “999” was not found in EVNT or is not valid for use as of the crash date, or is not valid for use at this level	Crash Event (1) Crash Event (2) Crash Event (3)
093	1985	School Zone Indicator is not “null”	Value entered must be “0”, “1”, or “9”	School Zone Ind must be blank, “0” (No), “1” (Yes), or “9” (Unknown)	School Zone Indicator

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated*	Field(s) Highlighted when Rule Violated
094	1985	Work Zone Indicator is not "null"	Value entered must be "0", "1", or "9"	Work Zone Ind must be blank, "0" (No), "1" (Yes), or "9" (Unknown)	Work Zone Indicator

Vehicle Data

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
097	1985	No vehicles entered	At least one vehicle must be entered	No vehicle is coded on crash. At least one vehicle is required	N/A
303	1985	Vehicle Ownership Code is "null"	Field required for each Vehicle	Required field Vehicle Ownership Code missing	Vehicle Ownership
304	1985	Vehicle Ownership Code is not "null"	Value entered must be in the Vehicle Ownership lookup table where the entry is valid as of the crash date	VHCL_OWNSHP_CD = "9" was not found in VHCL_OWNSHP or is not valid as of the crash date	Vehicle Ownership
306	1985	Vehicle Use Code is not "null"	Value entered must be in the Vehicle Use lookup table where the entry is valid as of the crash date	VHCL_USE_CD = "9" was not found in VHCL_USE or is not valid as of the crash date	Vehicle Use
301	1985	Vehicle Type Code is "null"	Field required for each Vehicle	Required field Vehicle Type Code missing	Vehicle Type
302	1985	Vehicle Type Code is not "null"	Value entered must be in the Vehicle Type lookup table where the entry is valid as of the crash date	VHCL_TYP_CD was not found in VHCL_TYP or is not valid as of the crash date	Vehicle Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
307	1985	Vehicle Type Code is not “null” and Vehicle Use Code is not “null”	Combination of Vehicle Type Code and Vehicle Use Code must be in the Vehicle Type - Vehicle Use Cross-Reference Table where the entry is valid as of the crash date	Combination of VHCL_TYP_CD = “99” and VHCL_USE_CD = “9” not valid in the VHCL_USE_VHCL_TYP_XREF cross-reference table	Vehicle Type Vehicle Use
308	1985	Vehicle Type Code is not “null “and Vehicle Use Code is not “null”	Combination of Vehicle Type Code and Vehicle Use Code must be in the Vehicle Type - Vehicle Use Cross-Reference Table where the entry is valid as of the crash date and the entry has a Validity Indicator value of "W"	Warning – combination of VHCL_TYP_CD = “99” and VHCL_USE_CD = “9” must be confirmed. Please review	Vehicle Type Vehicle Use
334	1985	Emergency Vehicle Use Flag is not “null”	Value entered must be “0” or “1”	EmergencyVehicleUseFlag value must be “1” for Yes or “0” for No	Emergency Vehicle Use Flag
311	1985	Trailer Quantity is not “null”	Value entered must be numeric	When entered, Trailer Quantity must be numeric	Trailer Quantity
339	1985	Vehicle Type Code = “01” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”,”1”,”8”, or “9”	Warning: trailer quantity unusual for Vehicle Type “01”, please confirm	Trailer Quantity
340	1985	Vehicle Type Code = “02” and Trailer Quantity is not “null”	Trailer Quantity must be “0”	Warning: trailer quantity unusual for Vehicle Type “02”, please confirm	Trailer Quantity

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
341	1985	Vehicle Type Code = “03” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “03”, please confirm	Trailer Quantity
342	1985	Vehicle Type Code = “04” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, “1”, “2”, “3”, “8” or “9”	Warning: trailer quantity unusual for Vehicle Type “04”, please confirm	Trailer Quantity
343	1985	Vehicle Type Code = “05” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1”, ”2”, ”8” or “9”	Warning: trailer quantity unusual for Vehicle Type “05”, please confirm	Trailer Quantity
344	1985	Vehicle Type Code = “06”’ and Trailer Quantity is not null	Trailer Quantity must be one of the following values: “0”, ”1”, ”2”, ”8” or “9”	Warning: trailer quantity unusual for Vehicle Type “06”. Please confirm	Trailer Quantity
345	1985	Vehicle Type Code = “07” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “07”, please confirm	Trailer Quantity
346	1985	Vehicle Type Code = “08” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “08”, please confirm	Trailer Quantity
347	1985	Vehicle Type Code = “09” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “09”, please confirm	Trailer Quantity
348	1985	Vehicle Type Code = “10” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “10, please confirm	Trailer Quantity

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
349	1985	Vehicle Type Code = “11” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “11”, please confirm	Trailer Quantity
350	1985	Vehicle Type Code = “13” and Trailer Quantity is not null	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “13”, please confirm	Trailer Quantity
351	1985	Vehicle Type Code = “14” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “14”, please confirm	Trailer Quantity
352	1985	Vehicle Type Code = “15” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1” ,”8” , or “9”	Warning: trailer quantity unusual for Vehicle Type “15”, please confirm.	Trailer Quantity
353	1985	Vehicle Type Code = “99” and Trailer Quantity is not “null”	Trailer Quantity must be one of the following values: “0”, ”1”, ”2”, ”8” or “9”	Warning: trailer quantity unusual for Vehicle Type “99”, please confirm.	Trailer Quantity
332	1985	Vehicle Movement is “null”	Field Required	Required field Movement Code missing	Vehicle Movement
333	1985	Vehicle Movement Code is not “null”	Value entered must be in the Movement lookup table where the entry is valid as of the crash date	MVMNT_CD was not found in MVMNT or is not valid as of the crash date	Vehicle Movement
312	1985	Vehicle Compass Direction From Code is “null”	Field required	Required field Compass Direction From Code missing	Vehicle Compass Dir. From
313	1985	Vehicle Compass Direction From Code is not “null”	Value entered must be in the Compass Direction lookup table where the entry is valid as of the crash date	CMPSS_DIR_CD = “9” was not found in CMPSS_DIR or is not valid as of the crash date	Vehicle Compass Dir. From

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
314	1985	Vehicle Compass Direction To Code is “null”	Field required	Required field CompassDirectionToCode missing	Vehicle Compass Direction To
315	1985	Vehicle Compass Direction To Code is not “null”	Value entered must be in the Compass Direction lookup table where the entry is valid as of the crash date	CMPSS_DIR_CD = “9” was not found in CMPSS_DIR or is not valid as of the crash date	Vehicle Compass Direction To
316	1985	Vehicle Movement Code is not (“1” or “2” or “3” or “4”) AND Vehicle Compass Direction From Code <> “0” AND Vehicle Compass Direction To Code <> “0”	Combination of Movement Code, Direction From Code and Direction to Code must be valid per formula below	Discrepancy exists between Movement and From or To Direction	Vehicle Movement Vehicle Compass Dir. From Vehicle Compass Dir. To
317	2002	Vehicle Action Code is “null”	Field required	Required field Action Code missing	Vehicle Action
318	1985	Vehicle Action Code is “not” null	Value entered must be in Action lookup table where the entry is valid as of the crash date	ACTN_CD = “999” was not found in ACTN or is not valid for use as of the crash date, or is not valid for use at this level	Vehicle Action
319	1985	Vehicle Movement Code = “6”	Vehicle Action Code must = “11”, “12”, “13” or “23”	If Vehicle Movement Code = “6” then Vehicle Action Code must = “11”, “12”, “13” or “23”	Vehicle Action
320	1985	Vehicle Movement Code = “7” or “8”	Vehicle Action Code must = “08”, “09”, “21”, “23” or “32”	If Vehicle Movement Code = “7” or “8” then Vehicle Action Code must = “08”, “09”, “21”, “23” or “32”	Vehicle Action
321	1985	Vehicle Movement Code = “9”	Vehicle Action Code must = “08” or “09”	If Vehicle Movement Code = “9” then Vehicle Action Code must = “08” or “09”	Vehicle Action

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
323	1985	Any Cause Codes have been entered for a given vehicle	For each Cause Code entered for a vehicle: Value must be on the Cause lookup table where the entry is valid as of the crash date and the entry is valid for use at the Vehicle Level	CAUSE_CD = “99” was not found in CAUSE or is not valid for use as of the crash date, or is not valid for use at this level	Vehicle Cause (1) Vehicle Cause (2) Vehicle Cause (3)
324	1985	Any Event Codes have been entered for a given vehicle	For each Event Code entered for a vehicle: Value must be on the Event lookup table where the entry is valid as of the crash date and the entry is valid for use at the Vehicle Level	EVNT_CD = “999” was not found in EVNT or is not valid for use as of the crash date, or is not valid for use at this level	Vehicle Event (1) Vehicle Event (2) Vehicle Event (3)
325	1985	Speed Involved Flag is not “null”	Value must be “0” or “1”	SpeedInvolvedFlag value must be 1 for Yes or 0 for No	Vehicle Speed Involved Flag
327	1985	Hit and Run Flag is not “null”	Value must be “0” or “1”	Vehicle Hit And Run Flag value must be “1” for Yes or “0” for No	Vehicle Hit / Run Fag
329	1985	Safety Equipment Used Quantity is not null	Value must be numeric	When entered, Safety Equip Used Qty must be numeric	Safety Equipment Used Quantity
330	1985	Safety Equipment Unused Quantity is not “null”	Value must be numeric	When entered, Vehicle Safety Equip Unused Qty must be numeric	Safety Equipment Unused Quantity
331	1985	Safety Equipment Use Unknown Quantity is not “null”	Value must be numeric	When entered, Vehicle Safety Equip Use Unknwn Qty must be numeric	Safety Equipment Use Unknown Quantity

Participant Data

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
653	1985	Participant Type Code is (“0”, “1”, “2” or “8”)	Vehicle Number must be > “00”	When the Participant Type is “0”, “1”, “2” or “8” a valid Participant Vehicle Number is required	Participant Vehicle Number
661	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”)	Vehicle Number must be “null”	When the Participant Type is “3”, “4”, “5”, “6”, “7” or “9” the Participant Vehicle Number must be “null”	Participant Vehicle Number
601	1985	Participant Type Code is “null”	Field required	Required field Participant Type Code missing	Participant Type
602	1985	Participant Type Code is not “null”	Value entered must be in the Participant Type lookup table where the entry is valid as of the crash date	PARTIC_TYP_CD was not found in PARTIC_TYP or is not valid as of the crash date	Participant Type
604	1985	Crash Type Code = “3”	At least one Participant must have a Participant Type Code value of “3”, “4”, or “5”	Crash type indicates Pedestrian, but no pedestrian was coded	Participant Type
605	1985	Crash Type Code = “6”	At least one Participant must have a Participant Type Code value of “6” or “7”	Crash type indicates Pedal-cyclist, but no pedal-cyclist was coded	Participant Type
335	1985		There can only be a maximum of one driver (Participant Type Code = “1”) per vehicle	More than one driver has been entered for vehicle “99”	Participant Type
680	1985	Participant Type Code = “1”	PVS Number must = “1”	When Participant Type is “1” (Driver), the PVS value must be “01”. Resequence participants if necessary	Participant Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
610	1985	Participant Hit and Run Flag is not “null”	Value must be “0” or “1”	Participant Hit And Run Flag value must be “1” for Yes or “0” for No	Participant Hit / Run Flag
611	1985	Public Employee Flag is not “null”	Value must be “0” or “1”	Public Employee Flag value must be “1” for Yes or ”0” for No	Public Employee Flag
614	1985	Sex Code is “null”	Field required	Required field Sex Code missing	Sex
615	1985	Sex Code is not “null”	Value entered must be in the Sex lookup table with an entry that is valid as of the crash date	SEX_CD = “9” was not found in SEX or is not valid as of the crash date	Sex
616	1985	Age is “null”	Field required	Required field Age Value missing	Age
617	1985	Age is not “null”	Value entered must be between “00” and “99” inclusive	Age must be numeric between “00” and “99” inclusive	Age
618	1985	Participant Type Code = “1”	Field Driver License Status required when the Participant Type = “1”	Required field Driver License Status Code missing	Driver License Status
619	1985	Driver License Status Code is not “null”	Value entered must be in the Driver License Status lookup table with an entry that is valid as of the crash date	DRVR_LIC_STAT_CD = “9” was not found in DRVR_LIC_STAT or is not valid as of the crash date	Driver License Status
620	1985	Participant Type Code = “1”	Field Driver Residence Status required when the Participant Type = “1”	Required field Driver Residence Status Code missing	Driver Residence Status

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
621	1985	Driver Residence Status Code is not “null”	Value entered must be in the Driver Residence Status lookup table with an entry that is valid as of the crash date	DRVR_RES_STAT_CD was not found in DRVR_RES_STAT or is not valid as of the crash date	Driver Residence Status
622	1985	Injury Severity Code is “null”	Field required	Required field Injury Severity Code missing	Injury Severity
623	1985	Injury Severity Code is not “null”	Value entered must be in the Injury Severity lookup table with an entry that is valid as of the crash date	INJ_SVRTY_CD was not found in INJ_SVRTY or is not valid as of the crash date	Injury Severity
664	1985	Participant Injury Severity Code = “7”	Participant Age Value must be between “00” and “04”	When the Participant's Injury Severity is “7”, the Participant Age must be “00” – “04”	Injury Severity Age
624	1985	Injury Severity Code is not “null”	Combination of Injury Severity code value and Crash Severity code value must be in the Crash Severity - Injury Severity cross-reference table with an entry that is valid as of the crash date	Combination of INJ_SVRTY_CD = “9” and CRASH_SVRTY_CD = ”9” not valid in the CRASH_INJ_SVRTY_XREF cross-reference table	Crash Severity Injury Severity
625	1985	Injury Severity Code is not “null”	Combination of Injury Severity code value and Crash Severity code value appears in the Crash Severity - Injury Severity cross-reference table with an entry that is valid as of the crash date and a Validity Indicator of “W”	Warning – combination of INJ_SVRTY_CD = “9” and CRASH_SVRTY_CD = “9” must be confirmed, please review	Crash Severity Injury Severity

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
630	1985	Participant Type Code is (“0”, “1”, “2”, “6” or “7”)	Field Safety Equipment Use Code is required	Required field Safety Equipment Use Code missing	Safety Equipment Type
631	1985	Participant Type Code is (“3”, “4”, “5” or “9”)	Safety Equipment Use must not be entered	Safety Equipment Use not applicable to this type of Participant	Safety Equipment Type
632	1985	Safety Equipment Use Code is not “null”	Value entered must be in the Safety Equipment Use lookup table where the entry is valid as of the crash date	SFTY_EQUIP_USE_CD was not found in SFTY_EQUIP_USE or is not valid as of the crash date	Safety Equipment Type
679	1985	Participant Type Code = “1”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “5”, “6”, “8” or “9”)	When Participant Type is 1 (Driver), Safety Equipment Type must be “0”, “1”, “2”, “5”, “6”, “8” or “9”	Safety Equipment Type
663	1985	Participant Type Code = “6” or “7”	Participant Safety Equipment Use Code must be in (“0”, “5”, “6” or “9”)	When the Participant Type is “6” or “7” (Pedalcyclist), Safety Equipment Type must be “0”, “5”, “6”, or “9”	Safety Equipment Type Participant Type Code
336	1985		The Vehicle Safety Equipment Used Quantity must be >= the number of participants for that vehicle where the Participant Safety Equipment Use Code in (“2”, “4” or “8”)	More participants in vehicle [vehicle sequence number] show safety equipment use than indicated on the vehicle row	Safety Equipment Type Vehicle Safety Equipment Used Quantity
337	1985		The Vehicle Safety Equipment Unused Quantity must be >= the number of participants for that vehicle where the Participant Safety Equipment Use Code in (“0”, “1” or “3”)	More participants in vehicle [vehicle sequence number] show safety equipment unused than indicated on the vehicle row	Safety Equipment Type Vehicle Safety Equipment Used Quantity

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
338	1985		The Vehicle Safety Equipment Use Unknown Quantity must be >= the number of participants for that vehicle where the Participant Safety Equipment Use Code = “9”	More participants in vehicle [vehicle sequence number] show safety equipment use unknown than indicated on the vehicle row	Safety Equipment Type Vehicle Safety Equipment Used Quantity
665	1985	Vehicle Type Code = “01”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is “01”, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
666	1985	Vehicle Type Code = “02”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 02, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
667	1985	Vehicle Type Code = “03”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “8” or “9”)	When Vehicle Type is 03, Partic. Safety Equip Type is generally “null”, “0”, “1”, “2”, “8” or “9”, confirm value	Safety Equipment Type
668	1985	Vehicle Type Code = “04”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 04, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
669	1985	Vehicle Type Code = “05”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 05, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
670	1985	Vehicle Type Code = “06”	Participant Safety Equipment Use Code must be in (“0”, “5”, “6”, “8” or “9”)	When Vehicle Type is 06, Partic. Safety Equip Type is generally “null”, “0”, “5”, “6”, “8” or “9”, confirm value	Safety Equipment Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
671	1985	Vehicle Type Code = “07”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 07, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
672	1985	Vehicle Type Code = “08”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 08, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
673	1985	Vehicle Type Code = ‘09’	Participant Safety Equipment Use Code must be in (“0”, “5”, “6”, “8” or “9”)	When Vehicle Type is 09, Partic. Safety Equip Type is generally “null”, “0”, “5”, “6”, “8” or “9”, confirm value	Safety Equipment Type
674	1985	Vehicle Type Code = “10”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “8” or “9”)	When Vehicle Type is 10, Partic. Safety Equip Type is generally “null”, “0”, “1”, “2”, “8” or “9”, confirm value	Safety Equipment Type
675	1985	Vehicle Type Code = “11”	Participant Safety Equipment Use Code must be in (“0”, “1”, “2”, “3”, “4”, “8” or “9”)	When Vehicle Type is 11, Partic. Safety Equip Type must be “null”, “0”, “1”, “2”, “3”, “4”, “8” or “9”	Safety Equipment Type
676	1985	Vehicle Type Code = “13”	Participant Safety Equipment Use Code must be in (“0”, ”5”, ”6”, ”8”, or ”9”)	When Vehicle Type is 13, Partic. Safety Equip Type is generally “null”, “0”, ”5”, ”6”, ”8”, or ”9”, conflrm value	Safety Equipment Type
677	1985	Vehicle Type Code = “14”	Participant Safety Equipment Use Code must be in (“0”, ”5”, ”6”, ”8”, or ”9”)	When Vehicle Type is 14, Partic. Safety Equip Type is generally “null”, “0”, ”5”, ”6”, ”8”, or ”9”, conflrm value	Safety Equipment Type
678	1985	Vehicle Type Code = “15”	Participant Safety Equipment Use Code must be in (“0”, ”5”, ”6”, ”8”, or ”9”)	When Vehicle Type is 15, Partic. Safety Equip Type is generally “null”, “0”, ”5”, ”6”, ”8”, or ”9”, conflrm value	Safety Equipment Type

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
659	1985	Participant Type Code is (“0”, “1”, “2”, or “8”) and Airbag Deployed Indicator is not null	Value entered must be “0”, “1” or “9”.	AirbagDeployIndicator must be “blank”, “0” (No), “1” (Yes), or “9” (Unknown)	Airbag Deployed Indicator
660	1985	Participant Type Code is not (“0”, “1”, “2”, or “8”) and Airbag Deployed Indicator is not “null”	Airbag Deployed Indicator must be “null”	When Participant is a Pedestrian or Pedalcyclist, the Airbag Deployed Indicator must be “null”	Airbag Deployed Indicator
634	1985	Participant Type Code = (“3” or “4” or “5”) and Participant Movement Code is not “null”	Participant Movement Code value entered must = “0” or “1”	Participant Movement Code must be “0” or “1” when Participant is a pedestrian	Participant Movement
635	1985	Participant Type Code = (“6” or “7” or “9”) and Participant Movement Code is not “null”	Participant Movement Code value entered must be on the Movement lookup table and the entry must be valid as of the Crash Date	MVMNT_CD = “9” was not found in MVMNT or is not valid as of the crash date	Participant Movement
654	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Movement Code is “null”	Participant Movement code is required	Participant Movement Code is required when Participant is a pedestrian, pedalcyclist, or unknown non-motorist	Participant Movement
636	1985	Participant Type Code is not (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Movement Code is not “null”	Participant Movement Code must be “null”	Participant Movement Code must be null when participant is a vehicle occupant	Participant Movement

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
656	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Compass Direction From Code is “null”	Participant Compass Direction From Code is required	A valid Participant Direction From value is required when Participant is not a vehicle occupant	Participant Compass Direction From
637	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Compass Direction From Code is not “null”	Participant Compass Direction From Code must be in Compass Direction lookup table and the entry must be valid as of the Crash date.	A valid Participant Direction From value is required when Participant is not a vehicle occupant	Participant Compass Direction From
639	1985	Participant Type Code is not (“3”, “4”, “5”, “6”, “7” or “9”) and Participant Compass Direction From Code is not “null”	Participant Compass Direction From Code must be “null”	Participant Direction From value must be “null” when Participant is a vehicle occupant	Participant Compass Direction From
657	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Compass Direction To Code is “null”	Participant Compass Direction To Code is required	A valid Participant Direction To value is required when Participant is not a vehicle occupant	Participant Compass Direction To
638	1985	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) AND Participant Compass Direction To Code is not null	Participant Compass Direction To Code must be in Compass Direction lookup table and the entry must be valid as of the Crash date.	A valid Participant Direction To value is required when Participant is not a vehicle occupant	Participant Compass Direction To

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
640	1985	Participant Type Code is not (“3”, “4”, “5”, “6”, “7” or “9”) and Participant Compass Direction To Code is not “null”	Participant Compass Direction To Code must be “null”	Participant Direction To value must be null when Participant is a vehicle occupant	Participant Compass Direction To
662	1985	Participant Movement Code is not blank and is between “0” and “5”, AND Compass Direction From Code is not “blank” and is not “0” AND Compass Direction To Code is not “blank” and is not “0” AND Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”)	Combination of Movement Code, Direction From Code and Direction to Code must be valid per formula below.	Discrepancy exists between Movement and From or To Direction	Participant Movement Code, Participant Compass Direction From Code, Participant Compass Direction To Code
641	1985	Participant Type Code is (“3” or “4” or “5”) AND Pedestrian Location Code is not “null”	Pedestrian Location value entered must be in Pedestrian Location lookup table and the entry must be valid as of the crash date	When the Participant is a pedestrian, a valid Pedestrian Location value must be entered	Pedestrian Location
658	1985	Participant Type Code is (“3” or “4” or “5”) AND Pedestrian Location Code is “null”	Pedestrian Location Code is required	When the Participant is a pedestrian, a valid Pedestrian Location value must be entered	Pedestrian Location

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
642	1985	Pedestrian Type Code is not (“3” or “4” or “5”) AND Pedestrian Location Code is not “null”	Pedestrian Location Code must be “null”	When the Participant is not a pedestrian, the Pedestrian Location value must be “null”	Pedestrian Location
643	2002	Participant Type Code is (“3”, “4”, “5”, “6”, “7” or “9”) and Participant Action Code is “null”	Participant Action Code is required	When Participant is not a vehicle occupant, a Participant Action code is required	Participant Action
644	1985	Participant Action Code is not “null”	Value entered must be on the Action lookup table and the entry must be valid as of the crash date and the value must be valid for use at the Participant level	ACTN_CD = “99” was not found in ACTN or is not valid for use as of the crash date, or is not valid for use at this level	Participant Action
645	1985	Participant Type Code = (“3”, “4”, “5”, “6”, “7” or “9”) AND no Error Codes were entered at the Crash level	At least one Participant Error Code must be entered	When Participant is not a vehicle occupant, a Participant Error Code is required if no Crash-level error has been specified	Participant Error (1)
646	1985	At least one Error code was entered for this Participant	For each Participant Error Code: The Error Code must be on the Error lookup table, must be valid on the crash date and must be valid for use at the Participant level.	CRASH_ERR_CD = “99” was not found in ERR or is not valid for use as of the crash date, or is not valid for use at this level	Participant Error (1) Participant Error (2) Participant Error (3)

Rule #	Beg. Year	Rule Invoked When:	Rule	Message Displayed when Rule Violated	Field(s) Highlighted when Rule Violated
647	1985	At least one Cause code was entered for this Participant	For each Participant Cause Code: The Cause Code must be on the Cause lookup table, must be valid on the crash date and must be valid for use at the Participant level	CAUSE_CD = “99” was not found in CAUSE or is not valid for use as of the crash date, or is not valid for use at this level	Participant Cause (1) Participant Cause (2) Participant Cause (3)
648	1985	At least one Event code was entered for this Participant	For each Participant Event Code: The Event Code must be on the Event lookup table, must be valid on the crash date and must be valid for use at the Participant level	EVNT_CD = “999” was not found in EVNT or is not valid for use as of the crash date, or is not valid for use at this level	Participant Event (1) Participant Event (2) Participant Event (3)
649	1985	Crash Type Code = “3”	None of the Participant Event Codes can be “05” (sub-ped)	If Crash Type Code = 3 (Pedestrian) then none of the Participant Event Codes can be 05 (sub-ped)	Crash Type [Participant Event]
650	1985	BAC Value is not “null”	Value entered must be between “00-79”, or be “80”, “84”, “85”, “86” or “87”	When entered, BAC Value must be between “00-79”, or be “80”, “84”, “85”, “86” or “87”	BAC Value
651	1985	Alcohol Use Reported Indicator is not “null”	Value entered must be “0”, “1” or “9”	Alcohol Use Reported Indicator must be “blank”, “0”, “1”, or “9”	Alcohol Use Reported Indicator
652	1985	Drug Use Reported Indicator is not “null”	Value entered must be “0”, “1” or “9”	Drug Use Reported Indicator must be “blank”, “0”, “1”, or “9”	Drug Use Reported Indicator

Validation Rules

(Continued)

Vehicle and Participant Movement / Compass Direction Formula

(Per rules 316 and 662):

When Movement Code = **'1'**

If cmpss_dir_from_cd = **'1'** then cmpss_dir_to_cd must = **'5'**
If cmpss_dir_from_cd = **'2'** then cmpss_dir_to_cd must = **'6'**
If cmpss_dir_from_cd = **'3'** then cmpss_dir_to_cd must = **'7'**
If cmpss_dir_from_cd = **'4'** then cmpss_dir_to_cd must = **'8'**
If cmpss_dir_from_cd = **'5'** then cmpss_dir_to_cd must = **'1'**
If cmpss_dir_from_cd = **'6'** then cmpss_dir_to_cd must = **'2'**
If cmpss_dir_from_cd = **'7'** then cmpss_dir_to_cd must = **'3'**
If cmpss_dir_from_cd = **'8'** then cmpss_dir_to_cd must = **'4'**

When Movement Code = **'2'**

If cmpss_dir_from_cd = **'1'** then cmpss_dir_to_cd must be in (6, 7, 8)
If cmpss_dir_from_cd = **'2'** then cmpss_dir_to_cd must be in (7, 8, 1)
If cmpss_dir_from_cd = **'3'** then cmpss_dir_to_cd must be in (8, 1, 2)
If cmpss_dir_from_cd = **'4'** then cmpss_dir_to_cd must be in (1, 2, 3)
If cmpss_dir_from_cd = **'5'** then cmpss_dir_to_cd must be in (2, 3, 4)
If cmpss_dir_from_cd = **'6'** then cmpss_dir_to_cd must be in (3, 4, 5)
If cmpss_dir_from_cd = **'7'** then cmpss_dir_to_cd must be in (4, 5, 6)
If cmpss_dir_from_cd = **'8'** then cmpss_dir_to_cd must be in (5, 6, 7)

When Movement Code = **'3'**

If cmpss_dir_from_cd = **'1'** then cmpss_dir_to_cd must be in (2, 3, 4)
If cmpss_dir_from_cd = **'2'** then cmpss_dir_to_cd must be in (3, 4, 5)
If cmpss_dir_from_cd = **'3'** then cmpss_dir_to_cd must be in (4, 5, 6)
If cmpss_dir_from_cd = **'4'** then cmpss_dir_to_cd must be in (5, 6, 7)
If cmpss_dir_from_cd = **'5'** then cmpss_dir_to_cd must be in (6, 7, 8)
If cmpss_dir_from_cd = **'6'** then cmpss_dir_to_cd must be in (7, 8, 1)
If cmpss_dir_from_cd = **'7'** then cmpss_dir_to_cd must be in (8, 1, 2)
If cmpss_dir_from_cd = **'8'** then cmpss_dir_to_cd must be in (1, 2, 3)

When Movement Code = **'4'** and cmpss_dir_from_cd <> cmpss_dir_to_cd))

Oregon Department of Transportation

Crash Analysis and Reporting Unit
555 13th Street NE, Suite 2
Salem, Oregon 97301-4178