Derivation of Iowa DOT Key Emphasis Areas (KEAs)

Bicyclists

Non-Motorist Type =

- Pedalcyclist (bicycle/tricycle/unicycle/pedal car) **OR**
- Pedalcycle passenger

Pedestrians

Non-Motorist Type =

- Pedestrian **OR**
- Skater, personal conveyance, wheelchair **OR**
- Other non-motorist (explain in narrative)

Young Drivers

Driver Age

- >= 14 **AND**
- <=20

Older Drivers

Driver Age

- >= 65 **AND**
- Not = 200
  Note: The unknown age is coded as 200

Unprotected Persons

Occupant Protection =

- None used

AND

Seating Position =

- Driver/Motorcycle Driver **OR**
- Front Seat Middle **OR**
- Front Seat Passenger Side **OR**
- 2nd Row Driver Side **OR**
- 2nd Row Middle **OR**
- 2nd Row Passenger Side **OR**
- 3rd Row Driver Side **OR**
- 3rd Row Middle **OR**

- 3rd Row Passenger Side **OR**
- 4th Row Driver Side **OR**
- 4th Row Middle **OR**
- 4th Row Passenger Side **OR**
- 5th Row Driver Side **OR**
- 5th Row Middle **OR**
- 5th Row Passenger Side **OR**
- In 6th row or greater

Distracted Driving

Driver Distraction =

- Electronic devices: Manual operation of an electronic communication device (texting, typing, dialing) **OR**
- Electronic devices: Talking on hand-held device **OR**
- Electronic devices: Talking on hands-free device **OR**
- Electronic devices: Adjusting devices (radio, climate) **OR**
- Electronic devices: Other activity with electronic device (explain in narrative) **OR**
- Other distraction inside vehicle: Passenger **OR**
- Other distraction inside vehicle: Unrestrained animal **OR**
- Other distraction inside vehicle: Eating or drinking related **OR**
- Other distraction inside vehicle: Smoking related **OR**
- Other distraction inside vehicle: Reaching for object(s)/fallen object(s) **OR**
- Other distraction inside vehicle: Inattentive/lost in thought **OR**
- Other distraction inside vehicle: Looked but did not see **OR**
- Other distraction inside vehicle: Other distraction inside vehicle (explain in narrative) **OR**
- Distraction outside vehicle (explain in narrative)

OR

Driver Condition =

- Asleep/fatigued

Impaired Driving Involved

Drug or Alcohol Related** =

- Drug **OR**
- Alcohol (< Statutory) **OR**
- Alcohol (Statutory) **OR**
- Drug/Alcohol (< Statutory) **OR**
- Drug/Alcohol (Statutory) **OR**
- Refused **OR**
- Under Influence of Alcohol/Drugs/Medications

** Derived attribute

Speed-related

Driver Contributing Circumstances (1,2) =

- Exceeded authorized speed **OR**
- Driving too fast for conditions **OR**
- Lost Control **OR**
- Followed too close **OR**
- Operating vehicle in a reckless, erratic, careless, negligent manner

Heavy Truck Involved

Vehicle Configuration =

- Truck/trailer **OR**
- Truck tractor (bobtail) **OR**
- Tractor/semi-trailer **OR**
- Tractor/doubles **OR**
- Tractor/triples **OR**
- Other heavy truck (> 10000 lbs) (cannot classify)

Motorcycles

Vehicle Configuration =

- Motorcycle **OR**
- 3-wheeled, enclosed **OR**
- 3-wheeled, unenclosed

Other Vehicles

Vehicle Configuration =

- School bus (seats > 15) **OR**
- Small school bus (seats 9-15) **OR**
- Other bus (seats > 15) **OR**
- Other small bus (seats 9-15) **OR**
- Farm tractor **OR**
- Farm equipment (explain in narrative)

Train

First Harmful Event OR Most Harmful Event OR Sequence of Events (1,2,3,4) =

- Collision with: Railway vehicle/train

OR

Vehicle Configuration =

- Train

Intersection

Type of Roadway Junction/Feature =

- Intersection: Roundabout **OR**
- Intersection: Traffic circle **OR**
- Intersection: Four-way intersection **OR**
- Intersection: T-intersection **OR**
- Intersection: Y-intersection **OR**
- Intersection: Five points or more **OR**
- Intersection: L-intersection **OR**
- Intersection: Shared use path or trail **OR**
- Intersection: Intersection with ramp

Local Roads

Concatenated System*** includes 'Municipal' **OR** 'Secondary'

OR

Road Class*** = 'Local'

*** Derived attribute based on spatial proximity of geocoded crash location to linear referencing system

Lane Departure

First Harmful Event OR Most Harmful Event OR Sequence of Events (1, 2, 3, 4) =

- Ran off-road, right **OR**
- Ran off-road, straight **OR**
- Ran off-road, left

OR

Multiple Vehicle Cross Centerline/Cross Median Crash**, specifically

- **Number of Vehicles** > 1

AND

- **Initial Direction of Travel** =
  - N & S **OR**
  - E & W

  AND EITHER OF

  - **Manner of Crash/Collision =**
    - Head-on (front to front) **OR**

- Sideswipe, same direction **OR**
- Sideswipe, opposite direction

OR

- **First Harmful Event <u>OR</u> Most Harmful Event <u>OR</u> Sequence of Events (1,2,3,4) =**
  - Crossed centerline (undivided) **OR**
  - Crossed median (divided)

OR

- **Driver Contributing Circumstances (1, 2)**
  - Lost control **OR**
  - Traveling wrong-way/on wrong-side

AND NEITHER OF

- **Vehicle Action =**
  - Overtaking/passing **OR**
  - Turning left

OR

- **Driver Contributing Circumstances (1, 2) =**
  - FTYROW: Making left turn

OR

- **Driver Contributing Circumstances (1, 2) =**
  - Passing: On wrong side **OR**
  - Passing: Where prohibited by signs/markings **OR**
  - Passing: With insufficient distance/inadequate visibility **OR**
  - Passing: Through/around barrier **OR**
  - Passing: Other passing (explain in narrative)

** Derived attribute

Roadside Collisions

First Harmful Event <u>OR</u> Most Harmful Event <u>OR</u> Sequence of Events (1,2,3,4) =

- Collision with fixed object: Bridge overhead structure **OR**
- Collision with fixed object: Bridge pier or support **OR**
- Collision with fixed object: Bridge/bridge rail parapet **OR**
- Collision with fixed object: Curb/island/raised median **OR**
- Collision with fixed object: Ditch **OR**
- Collision with fixed object: Embankment **OR**
- Collision with fixed object: Ground **OR**
- Collision with fixed object: Culvert/pipe opening **OR**
- Collision with fixed object: Guardrail - face **OR**

- Collision with fixed object: Guardrail - end **OR**
- Collision with fixed object: Concrete traffic barrier (median or right side) **OR**
- Collision with fixed object: Other traffic barrier (explain in narrative) **OR**
- Collision with fixed object: Cable barrier **OR**
- Collision with fixed object: Impact attenuator/crash cushion **OR**
- Collision with fixed object: Utility pole/light support **OR**
- Collision with fixed object: Traffic sign support **OR**
- Collision with fixed object: Traffic signal support **OR**
- Collision with fixed object: Other post/pole/support (explain in narrative) **OR**
- Collision with fixed object: Fire hydrant **OR**
- Collision with fixed object: Mailbox **OR**
- Collision with fixed object: Tree **OR**
- Collision with fixed object: Landscape/shrubbery **OR**
- Collision with fixed object: Snow bank **OR**
- Collision with fixed object: Fence **OR**
- Collision with fixed object: Wall **OR**
- Collision with fixed object: Building **OR**
- Collision with fixed object: Other fixed object (explain in narrative)

Winter Road Conditions

Surface Conditions =

- Ice/frost **OR**
- Snow **OR**
- Slush

Work Zone

Work Zone Related = 'Yes'