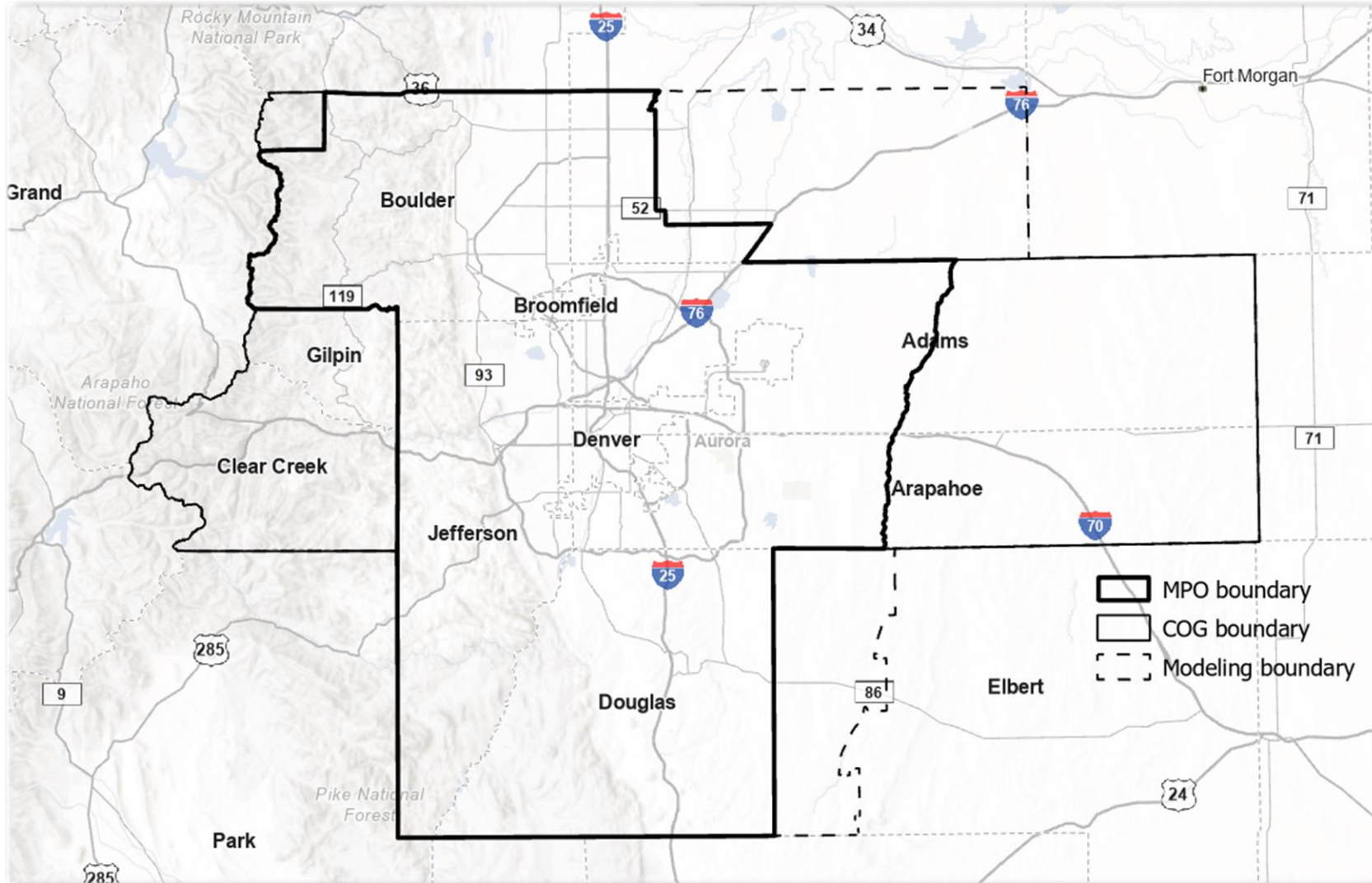


# DRCOG'S CRASH DATA

Jenny Wallace, GISP  
GIS Manager

# DRCOG'S PLANNING AREA



- data is received from CDOT and **processed annually**
- processing steps include:
  - prepping table schemas
  - geocoding off-system crashes
  - flagging high priority records
  - QC
- data is available on the DRCOG **[Regional Data Catalog](https://data.drcog.org)**

## CRASHES 2013

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

## CRASHES 2014

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

## CRASHES 2015

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

## CRASHES 2016

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

## CRASHES 2017

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

## CRASHES 2018

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)

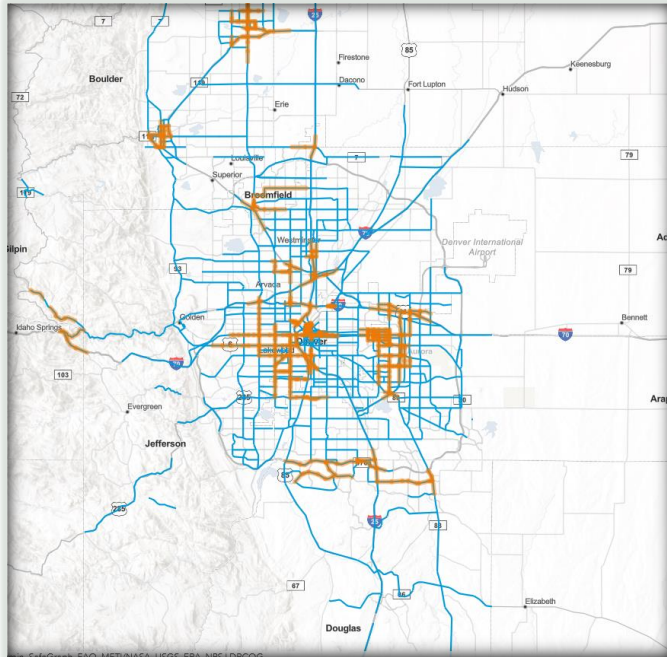
## CRASHES 2019

Annual traffic crash data in the DRCOG region. Data ...

[SEE DATA](#)



# DRCOG CRASH DATA USES



## Regional Vision Zero High-Injury Network and Critical Corridors

About Data Disclaimer

This map provides data resources for local jurisdictions to display the regional high-injury network and Critical Corridors identified in Taking Action on Regional Vision Zero using DRCOG-CDOT crash data from years 2013 - 2017. The map will assist local jurisdictions in identifying areas with the highest density of fatal and serious injury crashes in the DRCOG region. To interact with the data, please navigate to the Data tab.

Please also consider local data, observations, and estimates when identifying areas with high crash density. DRCOG hosts data on its Regional Data Catalog that is compiled from various sources. DRCOG offers its data in several formats, including shapefiles, GeoJSON and KMLs. Data can be downloaded at [DRCOG Regional Data Catalog](#).

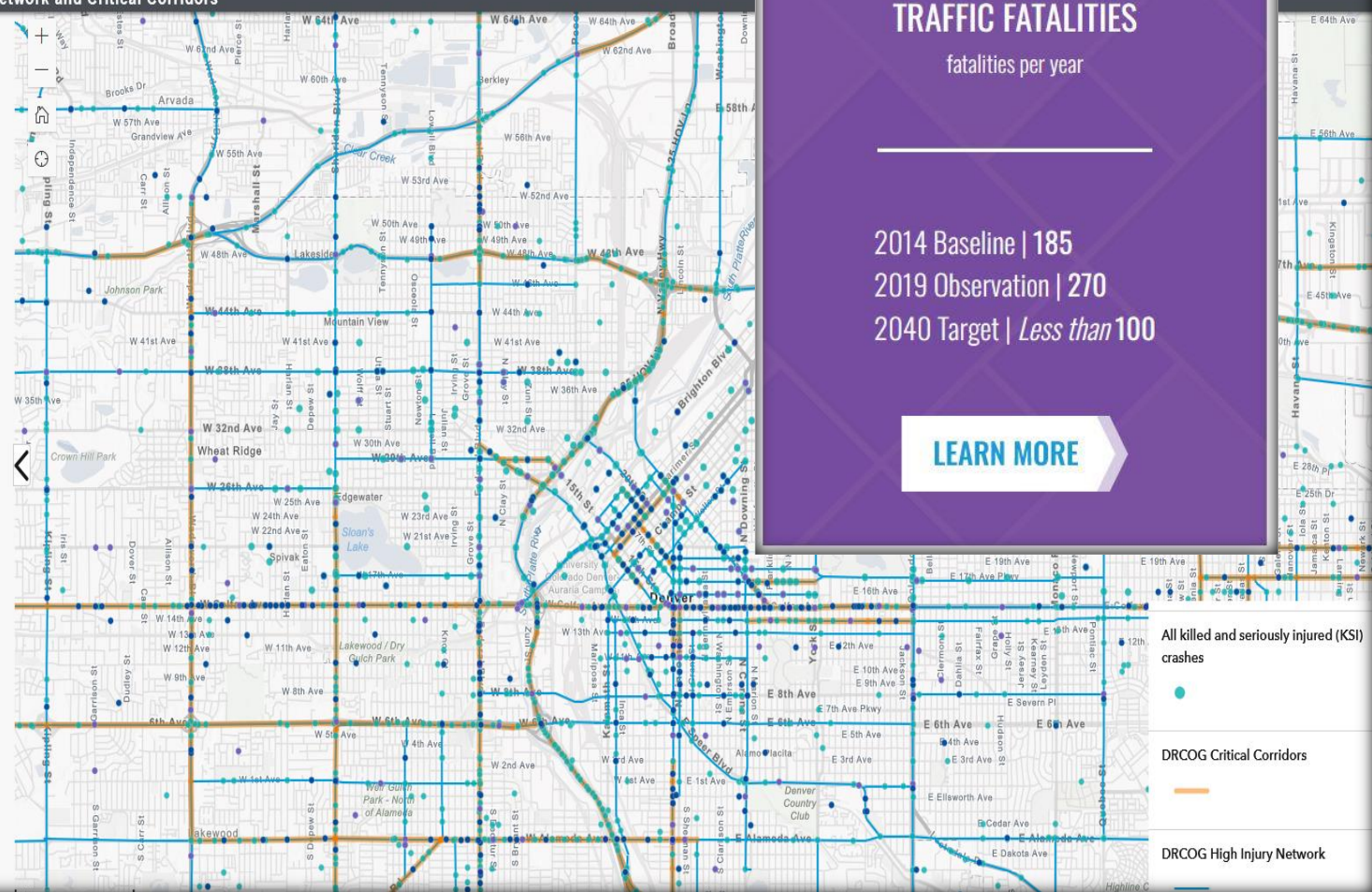
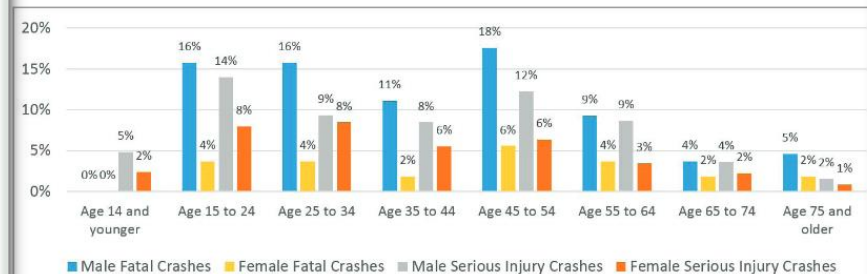
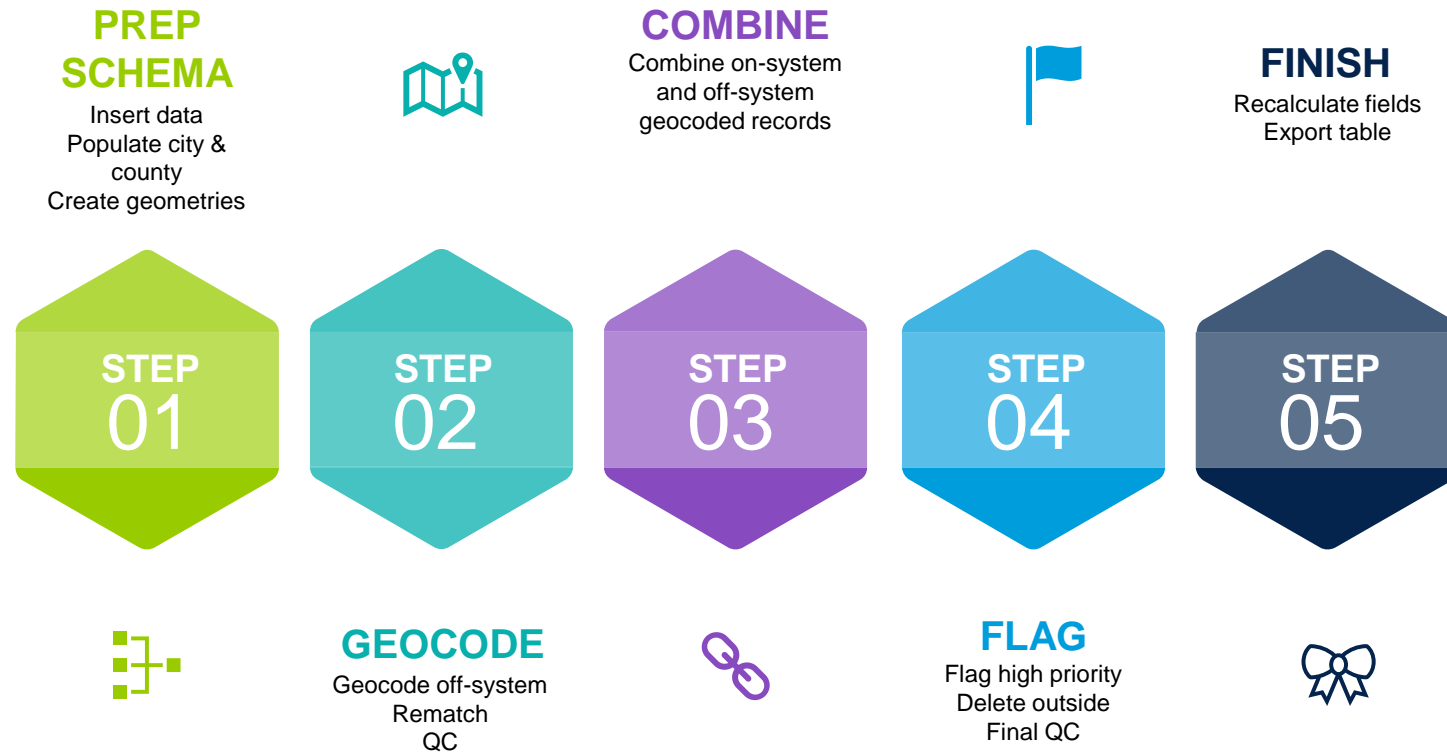


Figure 15. Pedestrian Age and Sex as a Percentage of Serious Injury and Fatal Crashes, 2013-2015



- New to 2020 data
  - Crash data form has migrated from DR2447 to DR3447
  - Data is split into a main table and 3 ancillary tables
  - Relationship classes were created by DRCOG
  - Additional fields were created by DRCOG
  - Data dictionary has been updated to DR3447 schema but also includes some historical DR2447 fields

# PROCESSING STEPS



# PROCESSING USING PYTHON

Quit
Logout

Files
Running
Clusters

Duplicate
Shutdown
View
Edit

Upload
New

1

/

Data

/

Crash

/

Crash\_2020

/

Processing

Name

Last Modified

File size

	..	seconds ago	
<input type="checkbox"/>	Outputs	a month ago	
<input type="checkbox"/>	Crash_Step10_Delete_Fields_For_Internal_Data.ipynb	3 months ago	20.7 kB
<input checked="" type="checkbox"/>	Crash_Step1_Import_Crash_Table.ipynb	Running 3 months ago	13.3 kB
<input type="checkbox"/>	Crash_Step2_Import_Nonmotorist_Table.ipynb	3 months ago	7.86 kB
<input type="checkbox"/>	Crash_Step3_Import_Occupant_Table.ipynb	3 months ago	5.77 kB
<input type="checkbox"/>	Crash_Step4_Import_Vehicle_Table.ipynb	3 months ago	12.2 kB
<input type="checkbox"/>	Crash_Step5_Crash_Table_Address_Cleaning.ipynb	3 months ago	11.3 kB
<input type="checkbox"/>	Crash_Step6_Crash_Data_Calculate_High_Priority.ipynb	4 months ago	8.21 kB
<input type="checkbox"/>	Crash_Step7_Crash_Add_Geocodes.ipynb	4 months ago	4.78 kB
<input type="checkbox"/>	Crash_Step7b_Crash_Add_Geocodes-Round 2.ipynb	3 months ago	3.22 kB
<input type="checkbox"/>	Crash_Step8_Replace_Values_Fieldnames.ipynb	14 days ago	150 kB
<input type="checkbox"/>	Crash_Step9_Final_Cleanup.ipynb	14 days ago	3.73 kB
<input type="checkbox"/>	Scratch.ipynb	6 months ago	18.5 kB
<input type="checkbox"/>	X_Not_Used_Crash_Step8_LRS Offset.ipynb	14 days ago	3.63 kB

# REPLACING CODED VALUES

jupyter Crash\_Step8\_Replace\_Values\_Fieldnames Last Checkpoint: 07/06/2022 (autosaved)

Logout

```
2
3 select distinct roaddescription from crash_2020_final;
```

Data Output Explain Messages Notifications

	roaddescription text
1	8
2	[null]
3	13
4	2
5	9
6	4
7	11
8	12
9	10
10	7
11	15
12	3
13	14
14	6
15	5
16	1
17	16

DM crash\_2020\_nonmotori

```
nceunit = 'Miles' WHERE
nceunit = 'Feet' WHERE
nceunit = 'At the inter
```

```
unit = 'Miles' WHERE mi
unit = 'Feet' WHERE mil
unit = 'At the milepoin
```

```
WHERE location = '1';
t side' WHERE location
nt side' WHERE location
intersection' WHERE lo
ssed Center Median into
Property' WHERE locatio
an/Island' WHERE locati
```

```
ecode = 'Non-Collision:
ecode = 'Non-Collision:
ecode = 'Non-Collision:
ecode = 'Non-Collision:
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
ecode = 'Collision with
```

```
UPDATE drcog_crash_2020_main SET mostharmfuleventsequencecode = 'Collision with
```







```
1 select distinct roaddescrp from drcog_crash_2020_main;
2
3 select distinct roaddescription from crash_2020_final;
```








Data Output Explain Messages Notifications

	roaddescrp text
1	[null]
2	Alley Related
3	Crossover Related
4	Shared-Use Path or Trail
5	Driveway Access Related
6	Ramp
7	7
8	Auxiliary Lane
9	Express/Managed/HOV L...
10	At Intersection
11	Parking Lot
12	Roundabout
13	Non-intersection
14	Intersection Related
15	Mid-Block Crosswalk
16	Ramp Related
17	16



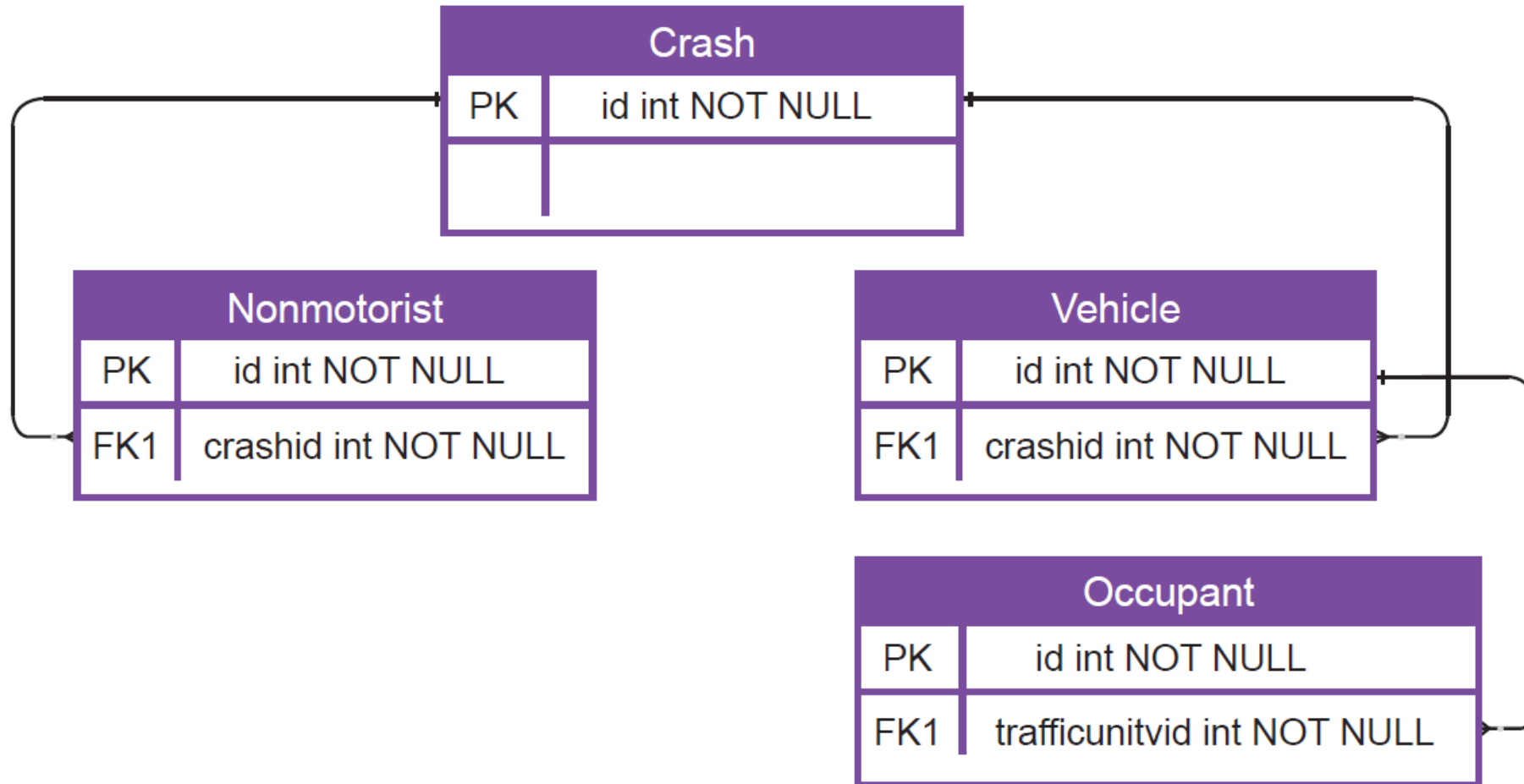
# CRASH 2020: GEODATABASE

 DRCOG\_CRASH\_2020.gdb  
 20181119-DR 3447 Changes  
 CommonCode  
 Crash\_Data\_Guide  
 DR2447\_Crash\_Data\_Dictionary\_External  
 DR3447\_Crash\_Data\_Dictionary\_External

 CRASH\_2020  
 CRASH\_2020\_CRASH\_2020\_NONMOTORIST  
 CRASH\_2020\_CRASH\_2020\_VEHICLE  
 CRASH\_2020\_NONMOTORIST  
 CRASH\_2020\_OCCUPANT  
 CRASH\_2020\_VEHICLE  
 CRASH\_2020\_VEHICLE\_CRASH\_2020\_OCCUPANT

- Crash
  - Main table, information about crash such as date, location, cause, DRCOG created fields for analysis, etc
- Nonmotorist
  - Ancillary table, info about each nonmotorist involved in crash such as non motorist type, safety equipment, movement prior to crash, etc
- Occupant
  - Ancillary table, info about each occupant of a vehicle involved in a crash such as age, position in vehicle, safety equipment, etc
- Vehicle
  - Ancillary table, info about each vehicle & driver involved in a crash such as vehicle type, model, speed, driver action, etc

# CRASH 2020: GEODATABASE RELATIONSHIPS



# CRASH 2020: DRCOG CREATED FIELDS

- drcog\_hp: high priority
- drcog\_nm\_si: number of non-motorists seriously injured
- drcog\_nm\_k: number of non-motorists killed
- drcog\_occ\_k: number of occupants killed
- drcog\_occ\_si: number of occupants seriously injured
- drcog\_total\_k: total number of people killed in crash
- drcog\_total\_si: total number of people seriously injured in crash
- drcog\_bike: “y” if a crash involves a bicycle.
- drcog\_ped: “y” if a crash involves a pedestrian

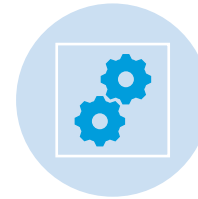
# FUTURE PROCESSING



Integrate linear  
referencing



More QC



Improve code





**QUESTIONS?**

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