Table 1
The Highest Level View of Traffic Safety Issues in Alabama
Table 1 Specifications for 2020 HSP (GMSS Page 2)
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May 1, 2019

See the SHA Safety Topics Page for more detailed analysis of any categories in Table 1:
http://www.safehomealabama.gov/safety-topics/

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Introduction

Table 1 is the name given to a critical tool in Alabama traffic safety decision-making. It is aptly named in that it is recommended to be the first thing that traffic safety professionals consider then they are allocating budgets at the highest levels. Table 1 presents on one page a comparison of select types of crashes, which have been chosen by traffic safety professionals in Alabama specifically for this purpose. Recent upgrades demonstrate that Table 1 is not a fixed entity, but is one that can and should be changed as new issues emerge.

The information on each line within Table 1 is labeled as *crash categories*. It is important to recognize that these categories are not mutually exclusive – in fact, it would be difficult to find a crash that fell into only one of these categories, while it is easy to imagine crashes that fall into five or more. The categories were originally set up by a group of traffic safety professionals about two decades ago in an attempt to be as comprehensive as possible. These categories have been augmented and combined (some eliminated) over the years to better satisfy the goals of accuracy and optimization.

The major purpose of this document is to provide an understandable working definition of the crash categories of Table 1 so that it is more useful and understandable in the HSP and all other uses to which it might be applied. This has been largely in response to the many questions that come up as to what a particular crash category means. Currently Table 1 is used in the HSP, the SHSP, and most other traffic safety strategic plans (e.g., the Impaired Driving, Restraints, and Traffic Safety Information Systems Strategic Plans). It is included wherever a high-level perspective of traffic safety issues is seen to be of benefit.

This document continues by presenting the narrative description of Table 1 crash categories that will be published for all relevant FY2019 traffic safety documents. This is followed by several appendices that provide the rationale for the various categories, and these are expected to provide a basis for making additional modifications to Table 1 in the future. The following are the general topics for this appendix:

- Appendix A. Table 1 for the FY2020 HSP; now Grants Management Solution Suite (GMSS) Page 2;
- Appendix B. Table 1 for the FY2019 HSP;
- Appendix C. Changes of Position in Table 1 from CY2017 to CY2018;
- Appendix D. Technical Filter Definitions.

This document should serve the purpose of providing all input to the process of (1) understanding and using Table 1 properly, and (2) continuing to revise the definitions, modifying existing items, or the addition of new categories according to changing conditions.

Narrative Description of Categories

The purpose of these narrative descriptions is to give the non-technical user of Table 1 a simple description of each of the items so that they can better be used to make comparisons that are essential to effective resource allocations among the various categories. It is expected that these simple descriptions will become part of that section of the HSP that contains Table 1. More precise technical definitions are given in the appendices.

Unless otherwise indicated, the counts presented in Table 1 are Crashes. Exceptions are crash categories 1 and 19, which are restraint items. These two exceptions count involved persons, and an asterisk (*) is placed on these items for the footnote that describes the reason for the exception (see Table 1 in Appendix B).

The descriptions below are given in terms of the Table 1 item numbers that were used in the FY2019 HSP. A brief rationale will be given for each category so that its use can be placed into a real-world context. *The ordering within Table 1 is by the number of fatalities that were found for each category.* This ordering will change when updates to Table 1 are produced in the future, due to the changes in the categories as well and the changes in the number of fatal crashes counted within each. For a more formal and definitive description, see Appendix D.

There has been no attempt whatsoever to make these categories mutually exclusive. It is fairly easy to imagine crashes that might include five to ten of the categories simultaneously. Users of Table 1 will need to apply their knowledge of traffic crashes to estimate which of the multiple causes might be the primary cause for the fatalities or other severities indicated.

1.   Seatbelt Restraint Fault*
This item records those restraint faults (generally non-use, but could be improper use) of restraint that have been found to generally result in an increase in those who are not properly restrained. It covers drivers and all occupants of age 6 and older. Those aged less than 6 are covered in Category 19, Child Restraint Fault.

2.   Speed Involved
This item includes all crashes in which speed was indicated to be a factor, which is generally indicated as "Over Speed Limit."

3.   ID/DUI All Substances
This item includes all crashes in which either alcohol or any other drug was indicated to be involved in the crash.

4.   Hit Obstacle on Roadside
This item includes crashes where the vehicle ran off the road and struck an object on the roadside, restricted to obstacles for which the responsible agency would have some capability to either remove or otherwise mitigate the hazard.

5.   Pedestrian, Bicycle and School Bus
This filter is obsolete and is in the table now as just a place holder. Its original intention was to be a metric of younger school children involvement, but each of its constituents now has its own category.

6.   Fail to Yield or "Ran" (All)
This is a new item that includes all subcategories of Failure to Yield the Right-of-Way and "Ran xxx," such as "Ran a Stop Sign" or "Ran a Traffic Signal." The reporting of just one or a small subset of these did not seem to be warranted since the underlying cause of such behavior is the same regardless of where it manifests itself. Since this category has changed considerably from the past, we will give the total specification for it:
- Ran Traffic Signal
- Ran Stop Sign
- Failed to Yield Right-of-Way from/to …
  - Traffic Signal
  - Stop Sign
  - Yield Sign
  - Making Left or U-Turn
  - Making Right Turn
  - Making Right Turn on Red Signal
  - from Driveway
  - from Parked Position
  - at Uncontrolled Intersection
  - to Pedestrian in Crosswalk
- Failed to Yield the Right-of-Way (stated unqualified)
- Other Failed to Yield

7.   Mature – Age > 65 Caused
This item includes all crashes in which the causal driver was of age greater than 65 (i.e., 66 or older).

8.   Pedestrian Involved
This item includes all crashes that involved pedestrians in any way, independent of whether or not the pedestrian was the cause of the crash. See comment under Motorcycle Involvement, Category 9.

9.   License Status Deficiency of Causal Driver
This item includes all crashes in which the causal driver had one or more of the following driver license status deficiencies: Denied, Expired, Fraudulent, Revoked, and/or Suspended. It serves

as an indicator as to whether the change of license status has a significant effect on the crash expectations of those drivers involved.

10.   Wrong Way Items

All crashes where the causal vehicle is in a lane for oncoming traffic; this includes median crossovers and also lane departures into oncoming traffic on two-lane roads. It also includes violations in no-passing zones, since these offenses would put the causal driver into oncoming traffic lanes.

11.   Youth Age 16-20 Caused

This item includes all crashes caused by drivers of age 16-20 inclusive.

12.   Motorcycle Involved

This item is for those crashes in which a motorcycle was involved either as the causal or the second unit in the crash.

General comment on vehicle type involvement. Discussions were conducted as to whether categories that involved vehicle types should be those "involved" or those "caused by." It was determined that countermeasures to these crashes could, and in some cases should, impact vehicles that are not of the category type. Thus, it was felt that *all crashes* in which they were involved should be included, and not just those caused by the (drivers of the) specific vehicle type. This applies to all categories that are defined by a vehicle type, including pedestrians.

13.   Aggressive Operation

This code is indicated by officers when there are two or more PCCs that are relevant and thus the indication is that the driver was under some psychological stress to disregard several safety considerations simultaneously.

14.   Distracted Driving

Many different things tend to distract drivers, and this item is an attempt to count all of them. These would include distracted by: Passenger; Use of Electronic Communication Device; Use of Other Electronic Device; Fallen Object; Fatigued/Asleep; Insect/Reptile; Other Distraction Inside the Vehicle; and/or Other Distraction Outside the Vehicle. Of these Fatigued/Asleep is redundant with Drowsy Driving (see 16). For purposes of analysis, it is being left in this list to be consistent with the way it is reported on the crash report. It should be noted that Drowsy Driving may include items of fatigue and sleep that are not within the Distracted Driving category. See Category 16, which is a new category added for the most recent upgrade.

15.   Drowsy Driving

This item includes any and all indications that the driver or drivers were drowsy or falling asleep.

16.   Large Truck Involved
Generally, this covers all trucks larger than the typical pickup truck. The attempt here is to concentrate on the size of the truck as opposed to its function or whether it is a CMV or not (some will be; others are not). For specific details, see the filter below. See comment under Motorcycle Involvement, Category 9.

17.   Utility Pole
There are many roadside obstacles that are struck by vehicles that run off the road. These are broken out since utility poles are obstacles that are of special interest to utility companies, and they can be moved or otherwise "protected."

18.   Workzone Related
There are about ten locations within a workzone in which a crash can be specified to have been located. This item includes any or all of them. The workzone does not need to be a cause of the crash in any way; the crash just needs to be located in or adjacent to the workzone.

19.   Vehicle Defects (All)
This includes all reportable vehicle defects, namely: Brakes, Steering, Tire Blowout/Separation, Improper Tread Depth, Wheels, Wipers, Windows/Windshield, Mirrors, Trailer Hitch/Coupling, Power Train, Fuel System, Exhaust, Headlights, Tail Lights, Turn Signal, Suspension, Cruise Control, Body/Doors, and Other, Paper Report Archive that are no longer reported in eCrash include: Tires, Lights, Restraint System, and Cargo.

20.   Vision Obscured
This covers the following situations in which vision might be obscured by something in the roadway or its environment.
C408: CU Vision Obscured By
      2   Trees/Crops
      3   Buildings
      4   Embankment
      5   Sign/Billboard
      6   E Lights/Glare (Roadside)
      7   Hillcrest
      8   Curve in Road
Rationale: the vision obstructions listed are those that can be addressed by engineering types of countermeasures and thus exclude items of a temporary nature, such as obstructions caused by weather conditions. Roadway related obstructions are also included.

21.   Bicycle (Pedalcycle) Involved
This is all crashes in which a pedalcycle (mostly bicycles) were involved independent of who caused the crashes. See comment under Motorcycle Involvement, Category 9.

22.   Railroad Train Involved
This counts the number of crashes in which a railroad train was involved independent of who may have caused the crashes. See comment under Motorcycle Involvement, Category 9.

23.   Child Restraint Fault*
This includes the child passengers aged 5 or younger who were not properly restrained.

24.   Contributing Roadway Defects
Any crash where a roadway defect was noted as a Contributing Circumstance in any of the following: C015, C202 or C542 (PCC, CUCC and V2 Contributing Circumstance is equal to either:
    1   E Roadway/Sign/Signal Defect; or
    2   P Roadway Defect

25.   School Bus Involved
This is the number of crashes that involved a school bus independent of the causal unit. See comment under Motorcycle Involvement, Category 9.

APPENDIX

The following are the general topics for the appendixes:

- Appendix A. Table 1 for the FY2019 HSP (now GMSS Page 2)
- Appendix B. Table 1 for the FY2018 HSP
- Appendix C. Changes of Position in Table 1 from CY2016 to CY2017
- Appendix D. Technical Filter Definitions

Appendix A. Table 1 for the FY2020 HSP (GMSS** Page 2)

Table 1: Top Fatality Causes; Alabama CY2018 Data

Crash Type (Causal Driver)	Fatal Number	Fatal %	Injuries	Injury %	PDO No.	PDO %	Total
1. Seat Belt Restraint Fault*	372	3.67%	4,073	40.14%	5,703	56.20%	10,148
2. Speed Involved	199	1.94%	3,259	31.85%	6,774	66.20%	10,232
3. ID/DUI All Substances	169	3.05%	2,135	38.59%	3,228	58.35%	5,532
4. Hit Obstacle on Roadside	124	1.87%	2,126	32.14%	4,365	65.99%	6,615
5. Pedestrian, Bicycle, School Bus	117	7.04%	939	56.53%	605	36.42%	1,661
6. Fail to Yield or "Ran …" (All)	114	0.37%	7,676	24.92%	23,010	74.71%	30,800
7. Mature (65 or Older) Causal	112	0.75%	3,249	21.76%	11,567	77.49%	14,928
8. Pedestrian Involved	106	13.97%	621	81.82%	32	4.22%	759
9. License Deficiency Causal Driver	103	1.59%	2,018	31.22%	4,342	67.18%	6,463
10. Wrong Way Items	99	2.10%	1042	22.06%	3,582	75.84%	4,723
11. Youth (16-20) Causal Driver	86	0.37%	5,110	21.91%	18,129	77.72%	23,325
12. Motorcycle Involved	76	4.93%	1,065	69.02%	402	26.05%	1,543
13. Aggressive Operation	70	2.44%	856	29.89%	1,938	67.67%	2,864
14. Distracted Driving	43	0.29%	3208	21.93%	11,380	77.78%	14,631
15. Drowsy Driving	38	1.05%	1383	38.04%	2,215	60.92%	3,636
16. Large Truck Involved	36	0.52%	1,432	20.49%	5521	79.00%	6,989
17. Utility Pole	29	1.15%	877	34.90%	1,607	63.95%	2,513
18. Workzone Related	27	0.72%	770	20.50%	2,959	78.78%	3,756
19. Vehicle Defects – All	12	0.36%	690	20.70%	2,631	78.94%	3,333
20. Vision Obscured	10	0.84%	320	26.87%	861	72.29%	1,191
21. Bicycle	9	3.53%	206	80.78%	40	15.69%	255
22. Railroad Trains	4	7.69%	23	44.23%	25	48.08%	52
23. Child Restraint Fault*	4	0.84%	207	43.49%	265	55.67%	476
24. Roadway Defects – All	3	2.34%	28	21.88%	97	75.78%	128
25. School Bus Involved	2	0.31%	112	17.31%	533	82.38%	647

* All categories list the number of crashes except for the "Restraint Deficient" and "Child Restraint Deficient" categories. The restraint categories cannot accurately be measured by number of crashes so they list number of unrestrained persons for each severity classification.

** Grants Management Solution Suite

Appendix B. Table 1 for the FY2019 HSP

Table 1: Top Fatality Causes Alabama CY2017 Data

Crash Category	Fatal	Fatal %	Injuries	Injury %	PDO	PDO %	Total
1. Seat Belt Restraint Fault*	409	3.98%	4,112	40.06%	5,744	55.96%	10,265
2. Hit Obstacle on Roadside	214	3.26%	2,082	31.69%	4,274	65.05%	6,570
3. ID/DUI All Substances	178	3.22%	2,101	37.96%	3,256	58.83%	5,535
4. Speed Involved	122	4.78%	1,172	45.94%	1,257	49.27%	2,551
5. Pedest, Bicycle, School Bus	119	7.06%	951	56.44%	615	36.50%	1,685
6. Pedestrian Involved	112	14.47%	628	81.14%	34	4.39%	774
7. Mature (65 or Older) Causal	97	0.66%	3,297	22.57%	11,212	76.76%	14,606
8. License Deficiency Causal	93	1.43%	2,129	32.71%	4,287	65.86%	6,509
9. Large Truck Involved	87	0.95%	1,862	20.40%	7,179	78.65%	9,128
10. Fail to Yield or Ran (All)	82	0.27%	7,670	25.25%	22,630	74.48%	30,382
11. Youth (16-20) Causal Drvr	81	0.35%	5,080	21.84%	18,095	77.81%	23,256
12. Aggressive Operation	81	3.03%	829	30.97%	1,767	66.01%	2,677
13. Wrong Way Items	79	1.66%	1,081	22.66%	3,611	75.69%	4,771
14. Motorcycle Involved	72	4.62%	1,034	66.37%	452	29.01%	1,558
15. Distracted Driving	55	0.38%	3,243	22.28%	11,258	77.34%	14,556
16. Drowsy Driving	40	1.27%	1234	39.27%	1,868	59.45%	3,142
17. Utility Pole	34	1.39%	836	34.16%	1,577	64.45%	2,447
18. Vehicle Defects – All	33	0.79%	983	23.50%	3,167	75.71%	4,183
19. Work Zone Related	25	0.80%	643	20.70%	2,439	78.50%	3,107
20. Vision Obscured	14	1.18%	340	28.57%	836	70.25%	1,190
21. Child Restraint Fault*	12	0.45%	362	13.69%	2,271	85.86%	2,645
22. Bicycle	6	2.25%	201	75.28%	60	22.47%	267
23. Railroad Trains	4	8.70%	17	36.96%	25	54.35%	46
24. School Bus Involved	1	0.16%	121	19.30%	505	80.54%	627
25. Roadway Defects – All	0	0.00%	20	16.26%	103	83.74%	123

* All categories list number of crashes except for the "Restraint Deficient" and "Child Restraint Deficient" categories. The restraint categories cannot accurately be measured by number of crashes so they list number of unrestrained persons for each severity classification.

Appendix C. Changes of Position in Table 1 from CY2017 to CY2018 Data

CY2017	CY2018	Crash Categories
1	1	Seat Belt Restraint Fault*
4	2	Speed Involved
3	3	ID/DUI All Substances
2	4	Hit Obstacle on Roadside
5	5	Pedestrian, Bicycle, School Bus
10	6	Fail to Yield or "Ran …" (All)
7	7	Mature (65 or Older) Causal Driver
6	8	Pedestrian Involved
8	9	License Deficiency Causal Driver
13	10	Wrong Way Items
11	11	Youth (16-20) Causal Driver
14	12	Motorcycle Involved
12	13	Aggressive Operation
15	14	Distracted Driving
16	15	Drowsy Driving
9	16	Large Truck Involved
17	17	Utility Pole
19	18	Work Zone Related
18	19	Vehicle Defects – All
20	20	Vision Obscured
22	21	Bicycle
23	22	Railroad Trains
21	23	Child Restraint Fault*
25	24	Roadway Defects – All
24	25	School Bus Involved

Appendix D. Filter Technical Definitions

Unless otherwise indicated, the counts will be Crashes for each of the attribute values, and the filter will be in the Crash Dataset. Exceptions are Items 1 and 19, restraint items.

1.   Seatbelt Restraint Fault*
Person Dataset: passenger is age 6 or older and is not properly restrained.
P323: Person Safety Equipment = any of the following
       1   None Used - Motor Vehicle Occupant

2.   Speed Involved
Primary Contributing Circumstance OR CU Contributing Circumstance
       Over Speed Limit

3.   ID/DUI All Substances
Use standard: DUI Alcohol or Drugs

4.   Hit Obstacle on Roadside

C017: First Harmful Event
       42   Collision with Tree
       43   Collision with Utility Pole
       44   Collision with Light Pole (Breakaway)
       45   Collision with Light Pole (Non-Breakaway)
       48   E Collision with Other Post/Pole/Support
       49   Collision with Fence
       50   Collision with Mailbox
       52   Collision with Other Fixed Object

5.   Pedestrian, Bicycle, School Bus
       This is a placeholder for an obsolete category that is no longer applicable.

6.   Fail to Yield or "Ran" (All)
Primary Contributing Circumstance OR CU Contributing Circumstance
       3   E Ran Traffic Signal
       4   E Ran Stop Sign
       27   E Failed to Yield Right-of-Way from Traffic Signal
       28   E Failed to Yield Right-of-Way from Stop Sign
       29   E Failed to Yield Right-of-Way from Yield Sign
       30   E Failed to Yield Right-of-Way Making Left or U-Turn
       31   E Failed to Yield Right-of-Way Making Right Turn
       32   E Failed to Yield Right-of-Way Making Right Turn on Red Signal

33	E Failed to Yield Right-of-Way from Driveway
34	E Failed to Yield Right-of-Way from Parked Position
35	E Failed to Yield Right-of-Way at Uncontrolled Intersection
36	E Failed to Yield Right-of-Way to Pedestrian in Crosswalk
37	Failed to Yield the Right-of-Way
38	E Other Failed to Yield

7. Mature – Age > 65 Caused
CU Driver Age > 65

8. Pedestrian Involved
Number of Pedestrians > 0

9. License Status Deficiency
C114: CU Driver License Status
3	Denied
4	Expired
5	Fraudulent
7	Revoked
8	Suspended

10. Wrong Way Items
C015 or C202 = 10 or 11 or 12 or 21

11. Youth Age 16-20 Caused
15 < CU Driver Age < 21

12. Motorcycle Involved
Causal Unit (CU) Type OR Vehicle 2 (V2) Type
Motorcycle

13. Aggressive Operation
C015 or C202 = 2

14. Distracted Driving
C015: Primary Contrib Circ   OR   CU Contrib Circ   OR   C020 E Distracted Driving Opinion
39	1	E Distracted by Passenger
40	2	E Distracted by Use of Electronic Communication Device
41	3	E Distracted by Use of Other Electronic Device
42	4	E Distracted by Fallen Object
43	5	E Fatigued/Asleep
44	6	E Distracted by Insect/Reptile
45	7	E Other Distraction Inside the Vehicle
46	8	E Other Distraction Outside the Vehicle

15. Drowsy Driving
Any asleep or fatigued options

C015=43
C020=5
C121=5 or 11 or 12
C202=43
C521=5 or 11 or 12
C542=43

16. Large Truck Involved
C101: Causal Unit (CU) Type OR Unit 2 Type:
        7   E Single-Unit Truck (2-Axle/6-Tire)
        8   E Single-Unit Truck (3 Axles or Less)
        9   E Truck (6 or 7) with Trailer
        10   E Truck Tractor Only (Bobtail)
        11   E Tractor/Semi-Trailer
        12   E Tractor/Doubles
        13   E Tractor/Triples
        15   E Other Heavy Truck (Cannot Classify)
        17   E Mobile Home Transport

17. Utility Pole
C201: CU Vehicle First Harmful Event Location
        43   Collision with Utility Pole

18. Workzone Related
C415: CU Workzone Related = any of the following
        2   E Outside of the Workzone Warning Signs
        3   E Between Warning Signs and Work Area
        4   E In Termination Area of Workzone
        5   E On Temporary Detour
        6   E At Lane Shift Transition in Activity Area
        7   E Involving Workers/Eqpmt in Activity Area
        8   E Involving Roadway Conditions in Activity Area
        9   E Not Involving Workers/Conditions in Activity Area
        10   E Other Workzone Area
        14   P In/Related to Workzone*
C416: E CU Workzone Type
        1   Other Type of Workzone
        2   Intermittent or Moving Vehicle
        3   Work on Shoulder or Median

4	Lane Shift/Crossover	
5	Lane Closure	
6	Routine Maintenance	
7	Major Construction Project	

C409: CU Traffic Control Device

1	E Workzone Signs	

19. Vehicle Defects (All)

C222: CU Contributing Vehicle Defect = any of the following:

2	Brakes
3	Steering
4	E Tire Blowout/Separation
5	E Improper Tread Depth
6	Wheels
7	E Wipers
8	Windows/Windshield
9	E Mirrors
10	Trailer Hitch/Coupling
11	Power Train
12	Fuel System
13	Exhaust
14	E Headlights
15	E Tail Lights
16	Turn Signal
17	Suspension
18	E Cruise Control
19	E Body/Doors
20	Other
25	P Tires*
26	P Lights*
27	P Restraint System
28	P Cargo

20. Vision Obscured

C408: CU Vision Obscured By

2	Trees/Crops
3	Buildings
4	Embankment
5	Sign/Billboard
6	E Lights/Glare (Roadside)
7	Hillcrest
8	Curve in Road

Rationale: the vision obstructions listed are those that can be addressed by engineering types of countermeasures and thus exclude items of a temporary nature, such as obstructions caused by weather conditions. Permanent roadway related obstructions are also included.

21. Bicycle (Pedalcycle) Involved
C057: Number of Pedacyclists (note mis-spelling, omitted l) = GT 1
          (1=No Pedacyclists Involved)

22. Railroad Train Involved
C061: Number of Railroad Trains = any of the following
          2   1 Train Involved
          3   2 or More Trains Involved

23. Child Restraint Fault*
Person Dataset: passenger is age 5 or younger and is not properly restrained.
P323: Person Safety Equipment = any one of the following:
          1   None Used - Motor Vehicle Occupant
          2   Shoulder and Lap Belt Used
          3   Lap Belt Only Used
          4   Shoulder Belt Only Used
          8   E Forward Facing Child Safety Seat Used Improperly
          9   E Rear Facing Child Safety Seat Used Improperly
          10   E Child Booster Seat Used Improperly
          12   E Child in Arms of Restrained Adult
          13   E Child in Arms of Unrestrained Adult

24. Roadway Defects Contributed
C015: Primary Contributing Circumstance
          1   E Roadway/Sign/Signal Defect
          2   P Roadway Defect
C0202: CU Contributing Circumstance
          1   E Roadway/Sign/Signal Defect
          2   P Roadway Defect
C542: V2 Contributing Circumstance
          1   E Roadway/Sign/Signal Defect
          2   P Roadway Defect

25. School Bus Involved
C024: School Bus Related = any of the following
          2   E Yes - School Bus Directly Involved
          3   E Yes - School Bus Indirectly Involved
          5   P Yes - School Bus Involved*

See the SHA Safety Topics Page for more detailed analysis of any categories in Table 1:
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