High Risk Rural Roads Listings for Local Roads

The Department's district offices administer Florida's HRRR program with the Central Office providing budgetary and regulatory oversight. Each district determines its safety needs primarily by using crash rates for the qualifying functional classification of the road. Internal coordination efforts occur between Planning, Traffic Operations, Roadway Design, Work Program, and Maintenance - each collectively important to project implementation. Likewise, external coordination efforts occur with agencies such as the Florida Highway Patrol and organizations such as Metropolitan Planning Organizations.

The Department uses methodology for HRRR that identifies hazardous locations, prioritizes the locations by severity, and selects the most severe location for project development. Analyses are based on fatal and serious injury crash rates for rural major collector, minor collector, and local road segments. Segments selected are those with average crash rates that are higher than the district's average crash rate for the same roadway type an on which there are a statistically significant number of fatal and serious injury crashes. Implementation is based on funding availability and partnering with local governments and agencies to support efforts for local roads system enhancements.

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Definitions

Map ID: The number that identifies the segment on the accompanying map, following the table. It is composed of the DOT County Number and the segment sequence, separated by a dash (-). See the Table of County Numbers at the end of this Appendix for a cross-reference with county name.

County Name: The name of the county in which the segment is located. See the Table of County Numbers at the end of this Appendix for a cross-reference.

Roadway Name: The local name for the roadway on which the segment occurs, according to the map alias file at the Safety Office.

Roadway Category: This element is a combination of Urban/Rural (U/R) and Divided/Undivided (U/D).

AADT: The average number of vehicles per day (annual average) traveling through this roadway segment.

Fatal and Serious Injury Crash Statistics – Crashes: The total number of qualifying crashes that have occurred on that roadway segment during the 3 years spanned by this analysis. For this particular analysis, only crashes in which at least one person was fatally (Injury Severity code "5") or severely (Injury Severity code "4") injured are counted.

Fatal and Serious Injury Crash Statistics – Fatalities: The total number of fatalities (Injury Severity code "5") as a result of crashes related to the segment, for the 3 years spanned by the analysis.

Fatal and Serious Injury Crash Statistics – Injuries: The total number of injuries (Injury Severity codes 2, 3, OR 4) as a result of crashes related to the segment, for the 3 years spanned by the analysis. Note that this count includes injuries other than the fatal injuries and in addition to the severe injuries that qualify the crashes.

Fatal and Serious Injury Crash Statistics – Actual Rate: The total number of crashes on the segment divided by the Millions of Vehicle Miles (MVM) traveled for that segment. The MVM is calculated by multiplying the AADT by the length of the segment and by the number of days in the study (1086), then dividing by 1,000,000.

$$\frac{\text{Count of Crashes on Segment}}{\text{MVM for Segment}} = \text{Actual Crash Rate for Segment}$$

Analysis Data Tables Column Descriptions

Fatal and Serious Injury Crash Statistics – Average Rate: The total number of crashes on all segments in the same category within the District divided by the total Millions of Vehicle Miles (MVM – see definition above) traveled on all roadways in the same category within the District.

$$\frac{\text{Count of Crashes on Roadways of Same Category within District}}{\text{Cumulative MVM for All Roads in Same Category within District}} = \text{Average Crash Rate for Roadway Category}$$

Roadway ID: This 8-character code identifies the roadway in terms of the linear-referencing system used for the routing that is used for assignment of location and for analysis of crash rates. For roadways that are captured by the DOT's Roadway Characteristics Inventory (RCI) the Roadway ID is all numeric, and for roadways that are not captured in the RCI the Roadway ID contains an "A" character in the third position. The first two digits of the code are the numeric DOT code for County. See the Table of County Numbers at the end of this Appendix for a cross-reference with county name. For the roadways in the RCI, the third, fourth and fifth digits are the linear reference section for the SHS within County, and the sixth, seventh and eighth digits identify the subdivision of the primary section. For roadways not in the RCI, characters three through eight are a unique identifier, within the county, for the route on which the segment falls. NOTE that there may be multiple segments qualifying from the same route. Segments on the same route are differentiated by the mile-point range.

BMP: The milepost on the Roadway ID that identifies the exact point where the segment begins.

EMP: The milepost on the Roadway ID that identifies the exact point where the segment ends.

5% Report Segments Listings for SHS

The 5% Segments list for the State Highway System was compiled by evaluating each district separately. The number of locations per district represents 5% of the Crash Analysis Reporting system high crash segment list for each district. The locations were sorted by the highest number of crashes and by total count of fatalities and injuries within number of crashes. The appropriate number of locations was selected from each District.

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Definitions

Map ID: The number that identifies the segment on the accompanying map, following the table. It is composed of the DOT County Number and the segment sequence, separated by a dash (-). See the Table of County Numbers at the end of this Appendix for a cross-reference with county name.

County Name: The name of the county in which the segment is located. See the Table of County Numbers at the end of this Appendix for a cross-reference.

SR #: This is the State route number assigned to the location.

Roadway Category: This element is an abbreviated code that corresponds to one of the 38 roadway categories defined for the SHS. The limited access roadway types are separated by rural and urban and by interstate, toll, 'other', and ramp. For open access roadways, the types are rural, suburban and urban, combined with divided/undivided, median type (raised or painted), and number of lanes or one-way status. See the Table of SHS Roadway Category Codes at the end of this Appendix for a listing of codes and descriptions.

AADT: The average number of vehicles per day (annual average) traveling along this roadway segment.

Crash Statistics – Crashes: The number of crashes that have occurred on that roadway segment during the 3 years spanned by this analysis.

Crash Statistics – Fatalities: The total number of fatalities (INJSEV = 5) as a result of crashes related to the segment, for the 3 years spanned by the analysis.

Crash Statistics – Injuries: The total number of injuries (INJSEV 2, 3, OR 4) as a result of crashes related to the segment, for the 3 years spanned by the analysis.

Crash Statistics – PDO (Property Damage Only): The total number of crashes related to the segment, for the 3 years spanned by the analysis, for which no injuries were reported.

Crash Statistics – Actual Rate: The total number of crashes on the segment divided by the Millions of Vehicle Miles (MVM) traveled for that segment. The MVM is calculated by multiplying the AADT by the length of the segment and by the number of days in the study (1086), then dividing by 1,000,000.

$$\frac{\text{Count of Crashes on Segment}}{\text{MVM for Segment}} = \text{Actual Crash Rate for Segment}$$

Crash Statistics – Average Rate: The total number of crashes on all segments in the same category within the District divided by the total Millions of Vehicle Miles (MVM – see definition above) traveled on all roadways in the same category within the District.

$$\frac{\text{Count of Crashes on Roadways of Same Category within District}}{\text{Cumulative MVM for All Roads in Same Category within District}} = \text{Average Crash Rate for Roadway Category}$$

Analysis Data Tables Column Descriptions

Roadway ID: This 8-character code, based on the Department's linear referencing scheme, identifies the part of the SHS that contains the roadway segment. The first two digits are the numeric DOT code for County (see the Table of County Numbers at the end of this Appendix for a cross-reference with county name); the third, fourth, and fifth digits are the linear reference section for the SHS within County, and the sixth, seventh, and eighth digits identify the subdivision of the primary section. NOTE that there may be multiple segments qualifying from the same route. Segments on the same route are differentiated by the mile-point range.

BMP: The milepost on the Roadway ID that identifies the exact point where the segment begins.

EMP: The milepost on the Roadway ID that identifies the exact point where the segment ends.

District Comments and Recommendations: This space on the table shows the comments on the segments from the District Safety Office for the Managing District in which the segment exists. The comments address what safety improvements, if any, are scheduled to address safety concerns and may also address the issue of whether or not safety improvements are applicable or possible given the field conditions particular to the segment.

5% Report Intersections Listings for SHS

The 5% Intersections list for the State Highway System (SHS) was compiled by evaluating each district separately. The number of locations per district represents 5% of the Crash Analysis Reporting system intersection list for each district. The locations were sorted by the highest number of crashes and by total count of fatalities and injuries within number of crashes. The intersections were then compared to the already-compiled 5% list for SHS segments and any intersections appearing on an already-documented segment were removed from the list. Finally, the appropriate number of locations was selected from the remaining list for each District.

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Definitions

Map ID: The number that identifies the segment on the accompanying map, following the table. It is composed of the DOT County Number and the segment sequence, separated by a dash (-). See the Table of County Numbers at the end of this Appendix for a cross-reference with county name.

County Name: The name of the county in which the segment is located. See the Table of County Numbers at the end of this Appendix for a cross-reference.

SR # (Primary Roadway): This is the State route number assigned to the location.

Intersecting Roadway: This column gives the first nine characters of the description for the intersecting feature at the identified location.

Intersection – Type: For the Intersections on the SHS, this element is the Crash Rate Category Code for the dominant roadway at the intersection. It is an abbreviated code that corresponds to one of the 38 roadway categories defined for the SHS. The limited access roadway types are rural and urban by interstate, toll, 'other', and ramp. For open access roadways, the types are rural, suburban and urban by divided/undivided, by median type (raised or painted), and by number of lanes or one-way status. See the Table of SHS Roadway Category Codes at the end of this Appendix for a listing of codes and descriptions.

Intersection – Legs: This is the leg count (total number of entering/leaving roadways) for the intersection, as calculated by the system.

AADT: The estimated average number of entering vehicles per day (annual average) that passed through the intersection during the analysis period.

Crash Statistics -- Crashes: The number of crashes that occurred within the influence area of the intersection during the 3 years spanned by the analysis.

Crash Statistics -- Fatalities: The total number of fatalities (INJSEV = 5) as a result of crashes related to the intersection, for the 3 years spanned by the analysis.

Crash Statistics -- Injuries: The total number of injuries (INJSEV 2, 3, OR 4) as a result of crashes related to the intersection, for the 3 years spanned by the analysis.

Crash Statistics -- PDO (Property Damage Only): The total number of crashes related to the intersection, for the 3 years spanned by the analysis, for which no injuries were reported.

Crash Statistics – Actual Rate: The total number of crashes on the segment divided by the Millions of Entering Vehicles (MEV) for that intersection. The MEV is calculated by multiplying the AADT by the number of days in the study (1086), then dividing by 1,000,000.

$$\frac{\text{Count of Crashes at Intersection}}{\text{MEV for Intersection}} = \text{Actual Crash Rate for Intersection}$$

Analysis Data Tables Column Descriptions

Crash Statistics – Average Rate: The total number of crashes at all intersections of the same type (see definition above) within the District divided by the total Millions of Entering Vehicles (MEV – see definition above) for all intersections in the same category within the District.

$$\frac{\text{Count of Crashes at Intersections of Same Type within District}}{\text{Cumulative MEV for All Intersections of Same Type within District}} = \text{Average Crash Rate for Intersection Type}$$

Roadway ID: This 8-character code, based on the Department's linear referencing scheme, identifies the part of the SHS that contains the intersection. The first two digits are the numeric DOT code for County; the third, fourth, and fifth digits are the linear reference section for the SHS within County, and the sixth, seventh, and eighth digits identify the subdivision of the primary section.

MP: The milepost on the Roadway ID that identifies the exact point where the intersection exists. When multiple State Roads intersect, there should be multiple Roadway IDs and MPs noted.

District Comments and Recommendations: This space on the table shows the comments on the intersections from the District Safety Office for the Managing District in which the segment exists. The comments address what safety improvements, if any, are scheduled to address safety concerns and may also address the issue of whether or not safety improvements are applicable or possible given the field conditions particular to the intersection.

5% Report Segments Listings for Local Roads

The local roads listings followed a similar process to the State Highway System methodology for listing the 5% segments. All of the non-state-maintained roads were evaluated based on an average crash rate per roadway type within district, and those locations in the same roadway category and with similar crash rates were grouped together. A list of all segments with a statistically significant number of crashes was generated. Each District's listing was sorted by the highest number of crashes, and by the total count of fatalities and injuries within number of crashes, and the appropriate locations determined. The listing includes a "ROADWAY" number of which corresponds to a statewide map used for the analysis.

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Definitions

Map ID: The number that identifies the segment on the accompanying map, following the table. It is composed of the DOT County Number and the segment sequence, separated by a dash (-). See the Table of County Numbers at the end of this Appendix for a cross-reference with county name.

County Name: The name of the county in which the segment is located. See the Table of County Numbers at the end of this Appendix for a cross-reference.

Roadway Name: The local name for the roadway on which the segment occurs, according to the map alias file at the Safety Office.

Roadway Category: For the Local Roads analysis, the roadway category is a combination of Urban/Rural (U/R) and Divided/Undivided (U/D). No other information is available.

AADT: The average number of vehicles per day (annual average) traveling through the roadway segment.

Crash Statistics -- Crashes: The number of crashes that have occurred on that roadway segment during the 3 years spanned by this analysis.

Crash Statistics -- Fatalities: The total number of fatalities (INJSEV = 5) as a result of crashes related to the segment, for the 3 years spanned by the analysis.

Crash Statistics -- Injuries: The total number of injuries (INJSEV 2, 3, OR 4) as a result of crashes related to the segment, for the 3 years spanned by the analysis.

Crash Statistics -- PDO (Property Damage Only): The total number of crashes related to the segment, for the 3 years spanned by the analysis, for which no injuries were reported.

Crash Statistics -- Actual Rate: The total number of crashes on the segment divided by the Millions of Vehicle Miles (MVM) traveled for that segment. The MVM is calculated by multiplying the AADT by the length of the segment and by the number of days in the study (1086), then dividing by 1,000,000.

$$\frac{\text{Count of Crashes on Segment}}{\text{MVM for Segment}} = \text{Actual Crash Rate for Segment}$$

Crash Statistics -- Average Rate: The total number of crashes on all segments in the same category within the District divided by the total Millions of Vehicle Miles (MVM – see definition above) traveled on all roadways in the same category within the District.

$$\frac{\text{Count of Crashes on Roadways of Same Category within District}}{\text{Cumulative MVM for All Roads in Same Category within District}} = \text{Average Crash Rate for Roadway Category}$$

Analysis Data Tables Column Descriptions

Roadway ID: This 8-character code identifies the roadway in terms of the linear-referencing system used for the routing that is used for assignment of location and for analysis of crash rates. For roadways that are captured by the DOT's Roadway Characteristics Inventory (RCI) the Roadway ID is all numeric, and for roadways that are not captured in the RCI the Roadway ID contains an "A" character in the third position. The first two digits of the code are the numeric DOT code for County (see the Table of County Numbers at the end of this Appendix for a cross-reference with county name). For the roadways in the RCI, the third, fourth and fifth digits are the linear reference section for the State Road System within County, and the sixth, seventh and eighth digits identify the subdivision of the primary section. For roadways not in the RCI, characters three through eight are a unique identifier, within the county, for the route on which the segment falls. NOTE that there may be multiple segments qualifying from the same route. Segments on the same route are differentiated by the mile-point range.

BMP: The milepost on the Roadway ID that identifies the exact point where the segment begins.

EMP: The milepost on the Roadway ID that identifies the exact point where the segment ends.

5% Report Intersections Listings for Local Roads

The local roads listings followed a similar process to the State Highway System methodology for listing the 5% intersections. All of the non-state-maintained road intersections were evaluated based on an average crash rate per intersection type within district. A list of all intersections with a statistically significant number of crashes was generated. Each District's listing was sorted by the highest number of crashes and by the total count of fatalities and injuries within number of crashes. The intersections were then compared to the already-compiled 5% list for local road segments and any intersections appearing on an already-documented segment were removed from the list. Finally, the appropriate number of intersections were selected from the remaining list for each District.

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Definitions

Map ID: The number that identifies the segment on the accompanying map, following the table. It is composed of the DOT County Number and the segment sequence, separated by a dash (-). See the Table of County Numbers at the end of this Appendix for a cross-reference with county name.

County Name: The name of the county in which the segment is located. See the Table of County Numbers at the end of this Appendix for a cross-reference.

Primary Roadway: This column gives the local name for the primary roadway assigned to the intersection, according to the map alias file at the Safety Office.

Intersecting Roadway: This column gives the local name for the intersecting roadway, according to the map alias file at the Safety Office.

Intersection -- Type: This element is a combination of Urban/Rural (U/R), Divided/Undivided (U/D), Number of Legs (3, 4 or 5), and intersection configuration. Configuration codes are "X" for a crossing intersection, "T" for a perpendicular intersection that does not cross, "Y" for an intersection with a distinctly angled leg or legs, "M" for a merging intersection (usually on limited access roadways), "C" for a median break.

Intersection – Legs: This is the leg count (total number of entering/leaving roadways) for the intersection, as calculated by the system.

AADT: The average number of entering vehicles per day (annual average) that pass through the intersection in the analysis period.

Crash Statistics – Crashes: The number of crashes that occurred on that roadway segment during the 3 years spanned by this analysis.

Crash Statistics – Fatalities: The total number of fatalities (INJSEV = 5) as a result of crashes related to the intersection, for the 3 years spanned by the analysis.

Crash Statistics – Injuries: The total number of injuries (INJSEV 2, 3, OR 4) as a result of crashes related to the intersection, for the 3 years spanned by the analysis.

Crash Statistics – PDO (Property Damage Only): The total number of crashes related to the intersection, for the 3 years spanned by the analysis, for which no injuries were reported.

Crash Statistics – Actual Rate: The total number of crashes on the segment divided by the Millions of Entering Vehicles (MEV) for that intersection. The MEV is calculated by multiplying the AADT by the number of days in the study (1086), then dividing by 1,000,000.

$$\frac{\text{Count of Crashes at Intersection}}{\text{MEV for Intersection}} = \text{Actual Crash Rate for Intersection}$$

Analysis Data Tables Column Descriptions

Crash Statistics – Average Rate: The total number of crashes at all intersections of the same type (see definition above) within the District divided by the total Millions of Entering Vehicles (MEV – see definition above) for all intersections in the same category within the District.

$$\frac{\text{Count of Crashes at Intersections of Same Type within District}}{\text{Cumulative MEV for All Intersections of Same Type within District}} = \text{Average Crash Rate for Intersection Type}$$

Roadway ID: This 8-character code identifies the roadway on which the intersection falls, in terms of the linear-referencing system used for the routing that is used for assignment of location and for analysis of crash rates. For roadways that are captured by the DOT's Roadway Characteristics Inventory (RCI) the Roadway ID is all numeric, and for roadways not captured in the RCI the Roadway ID contains an "A" character in the third position. The first two digits of the code are the numeric DOT code for County. For the roadways in the RCI, the third, fourth and fifth digits are the linear referencing section for the State Road System within County, and the sixth, seventh and eighth digits identify the subdivision of the primary section. For roadways not in the RCI, characters three through eight are a unique identifier, within the county, for the route on which the segment falls. NOTE that there may be multiple intersections qualifying from the same route.

MP: The milepost on the primary Roadway ID that identifies the exact point where the intersection exists.

Analysis Data Tables Column Descriptions

Table of County Names and DOT County Numbers, by County Number

DOT County Number	DOT Geographic District	County Name
01	01	Charlotte
02	07	Citrus
03	01	Collier
04	01	Desoto
05	01	Glades
06	01	Hardee
07	01	Hendry
08	07	Hernando
09	01	Highlands
10	07	Hillsborough
11	05	Lake
12	01	Lee
13	01	Manatee
14	07	Pasco
15	07	Pinellas
16	01	Polk
17	01	Sarasota
18	05	Sumter
26	02	Alachua
27	02	Baker
28	02	Bradford
29	02	Columbia
30	02	Dixie
31	02	Gilchrist
32	02	Hamilton
33	02	Lafayette
34	02	Levy
35	02	Madison
36	05	Marion
37	02	Suwannee
38	02	Taylor
39	02	Union
46	03	Bay
47	03	Calhoun
48	03	Escambia
49	03	Franklin
50	03	Gadsden
51	03	Gulf
52	03	Holmes
53	03	Jackson
54	03	Jefferson
55	03	Leon
56	03	Liberty
57	03	Okaloosa
58	03	Santa Rosa
59	03	Wakulla
60	03	Walton
61	03	Washington

DOT County Number	DOT Geographic District	County Name
70	05	Brevard
71	02	Clay
72	02	Duval
73	05	Flagler
74	02	Nassau
75	05	Orange
76	02	Putnam
77	05	Seminole
78	02	St Johns
79	05	Volusia
86	04	Broward
87	06	Miami-Dade
88	04	Indian River
89	04	Martin
90	06	Monroe
91	01	Okeechobee
92	05	Osceola
93	04	Palm Beach
94	04	St Lucie

Analysis Data Tables Column Descriptions

Table of County Names and DOT County Numbers, by County Name

County Name	DOT County Number	DOT Geographic District
Alachua	26	02
Baker	27	02
Bay	46	03
Bradford	28	02
Brevard	70	05
Broward	86	04
Calhoun	47	03
Charlotte	01	01
Citrus	02	07
Clay	71	02
Collier	03	01
Columbia	29	02
Desoto	04	01
Dixie	30	02
Duval	72	02
Escambia	48	03
Flagler	73	05
Franklin	49	03
Gadsden	50	03
Gilchrist	31	02
Glades	05	01
Gulf	51	03
Hamilton	32	02
Hardee	06	01
Hendry	07	01
Hernando	08	07
Highlands	09	01
Hillsborough	10	07
Holmes	52	03
Indian River	88	04
Jackson	53	03
Jefferson	54	03
Lafayette	33	02
Lake	11	05
Lee	12	01
Leon	55	03
Levy	34	02
Liberty	56	03
Madison	35	02
Manatee	13	01
Marion	36	05
Martin	89	04
Miami-Dade	87	06
Monroe	90	06
Nassau	74	02
Okaloosa	57	03
Okeechobee	91	01
Orange	75	05

County Name	DOT County Number	DOT Geographic District
Osceola	92	05
Palm Beach	93	04
Pasco	14	07
Pinellas	15	07
Polk	16	01
Putnam	76	02
Santa Rosa	58	03
Sarasota	17	01
Seminole	77	05
St Johns	78	02
St Lucie	94	04
Sumter	18	05
Suwannee	37	02
Taylor	38	02
Union	39	02
Volusia	79	05
Wakulla	59	03
Walton	60	03
Washington	61	03

Analysis Data Tables Column Descriptions

Table of Crash Rate Category Codes and Descriptions for SHS Roads

Roadway Category		
Code	Short Name	Description
01	U-INT	interstate urban
02	R-INT	interstate rural
03	U-TOL	toll road urban
04	R-TOL	toll road rural
05	U-OLA	urban other limited access
06	R-OLA	rural other limited access
07	URAMP	ramp urban
08	RRAMP	ramp rural
10	U-2DR	urban 2-3 lane two-way divided raised median
11	U-2DP	urban 2-3 lane two-way divided paved median
12	U-2UN	urban 2-3 lane two-way undivided
13	S-2DR	suburban 2-3 lane two-way divided raised median
14	S-2DP	suburban 2-3 lane two-way divided paved median
15	S-2UN	suburban 2-3 lane two-way undivided
16	R-2DR	rural 2-3 lane two-way divided raised median
17	R-2DP	rural 2-3 lane two-way divided paved median
18	R-2UN	rural 2-3 lane two-way undivided
20	U-4DR	urban 4-5 lane two-way divided raised median
21	U-4DP	urban 4-5 lane two-way divided paved median
22	U-4UN	urban 4-5 lane two-way divided undivided
23	S-4DR	suburban 4-5 lane two-way divided raised median
24	S-4DP	suburban 4-5 lane two-way divided paved median
25	S-4UN	suburban 4-5 lane two-way divided undivided
26	R-4DR	rural 4-5 lane two-way divided raised median
27	R-4DP	rural 4-5 lane two-way divided paved median
28	R-4UN	rural 4-5 lane two-way divided undivided
30	U-6DR	urban 6 or more lane two-way divided raised median
31	U-6DP	urban 6 or more lane two-way divided paved median
32	U-6UN	urban 6 or more lane two-way undivided
33	S-6DR	suburban 6 or more lane two-way divided raised median
34	S-6DP	suburban 6 or more lane two-way divided paved median
35	S-6UN	suburban 6 or more lane two-way undivided
36	R-6DR	rural 6 or more lane two-way divided raised median
37	R-6DP	rural 6 or more lane two-way divided paved median
38	R-6UN	rural 6 or more lane two-way undivided
40	U1WAY	urban one way
41	S1WAY	suburban one way
42	R1WAY	rural one way
77	UNKN	undefined