

A GUIDE TO CONDUCTING ROAD SAFETY AUDITS IN OHIO



MID-OHIO REGIONAL
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PLANNING COMMISSION

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INTRODUCTION

This guidebook applies the eight-step Road Safety Audit (RSA) process recommended by the Federal Highway Administration to the roadways of Ohio's locally-maintained system (Figure 1). The Federal Highway Administration defines the RSA as "a formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team." RSAs use qualitative observations to report potential road safety issues and identify opportunities for improvements in safety for all road users. The detailed process diagram on the following page outlines the numerous processes, decisions, documents, sub-processes, and individuals involved in a successful audit.

RSAs are intended to result in the implementation of low- to medium-cost spot safety improvements at target locations and to document any need for more complex projects or studies. If anticipated improvements would require significant resources to implement, a full safety study should be considered.

More information on the RSA process is available at <https://safety.fhwa.dot.gov/rsa/>.



Figure 1. The Eight-Step Road Safety Audit Process

Key Agencies & Personnel

As shown in Figure 2 on the following page, numerous organizations are engaged in the successful completion of the RSA process, each with distinct roles and responsibilities. These roles and responsibilities are outlined below:

Regional Planning Organization: Regional Planning Organizations (RPO), including Metropolitan Planning Organizations (MPO) and Rural Transportation Planning Organizations (RTPO), serve as the primary facilitator of the regional road safety audit process. They are responsible for aligning the necessary stakeholders, information, and resources that allow for the successful completion of this process.

Local Public Agencies: Local Public Agencies (LPA) own, maintain, and oversee the roadways of interest. As such, they are intimately involved in many steps of the RSA process, including identifying the existing or planned road or intersection for the RSA and the RSA team. LPAs play a vital role in ensuring recommendations are actionable and can be implemented.

Ohio Department of Transportation District Office: The Ohio Department of Transportation (ODOT) District Offices, specifically the ODOT District Safety Review Team (DSRT) representative, serve as a frontline resource for regional planning organizations and local public agencies working to complete the RSA process. This includes ensuring RSA locations are appropriate, coordinating district participation on the RSA team, and engaging consultants on behalf of regional planning organizations for tasks that are beyond their capabilities.

ODOT Highway Safety Program: The ODOT Highway Safety Program staff ultimately review the recommendations developed during the RSA and work to open up funding for eligible safety recommendations.

Consultant(s): Consultants can serve a vital role in helping bridge the gap between existing resources at regional planning organizations, local public agencies, and district offices, and the successful completion of an RSA. Any required consultant assistance should be coordinated with the district office before starting the process.

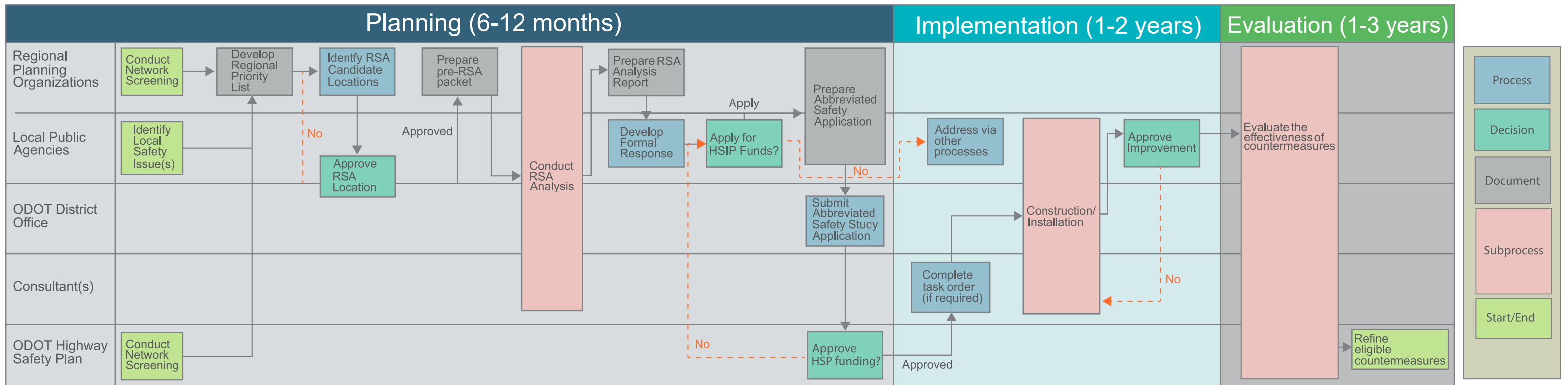


Figure 2. Road Safety Audit Process Diagram



STEP 1: **IDENTIFY** **LOCATION**

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STEP 1: IDENTIFY LOCATION

The first step in conducting a RSA is to identify the location to be audited. The owning/maintaining LPA should identify the location in coordination with the Regional Planning Organization (RPO). The RPO's regional priority safety locations list provides a starting point. The RPO should also coordinate with and seek consent from the ODOT DSRT to audit the selected location. This step is necessary in order to be considered for funding via the ODOT Highway Safety Improvement Program.

Identifying RSA Candidate Locations

RSAs provide an efficient means of coordinating a multidisciplinary team in the pursuit of identifying existing safety issues and low- to medium-cost spot safety treatments that address them. As such, not all locations identified on a regional priority safety location list will be appropriate as RSA candidate locations. In some instances, remedying observed safety issues could require in-depth analysis and substantial costs necessitating a full Safety Study Assistance project while other safety issues would be best addressed through low-cost Systemic Safety Improvement projects applied across a broader geographic area (Figure 3).

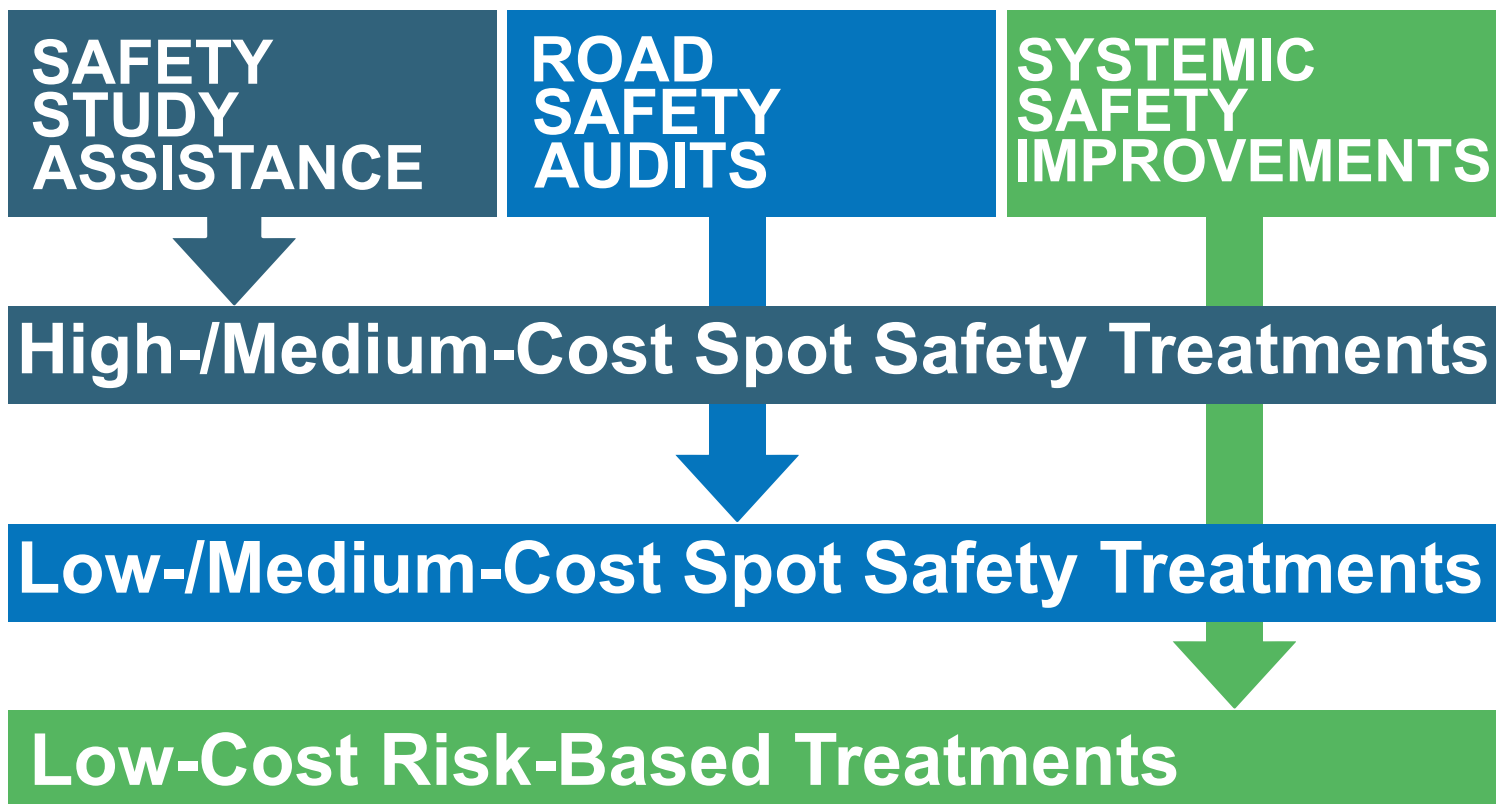



Figure 3. A simple decision tree such as shown here can be helpful to determine when an RSA may be an appropriate intervention.

When selecting RSA candidate locations from a regional priority list, it is important to make the following considerations:

- **High profile locations:** Are there sites on the regional priority list that have received substantial media or political attention or have brought about negative public comment within the region?
- **Sites experiencing significant changes in characteristics:** Did a roadway fundamentally change in regard to geometry, operations, roadway users, or environment? Has land use or development intensity changed in a particular area?
- **Potential for low- to medium-cost improvements:** Could observed safety issues at a location be addressed through low- to medium-cost improvements? Would the potential cost of improvements fall at or below \$500,000?

In addition to these considerations, data-driven approaches can be employed to identify RSA candidate locations. Potential data may include a regional priority intersections list, regional priority roadway segments list, roadway congestion models, average annual daily traffic (AADT) figures, and/or local agency maintenance/project programming schedules. These technical processes have the potential to be used in tandem with the customized network screening that takes place in the development of a regional priority safety list. For example:

- **Priority intersection and roadway segment overlay:** Intersections and roadway segments, if both considered in the development of a regional priority list, may be viewed within a Geographic Information System (GIS) interface to identify safety priority corridors where the two layers overlap.
- **Other data overlays:** If resources and data are available, RPOs can use other related datasets and GIS overlays, such as roadway congestion models or average annual daily traffic (AADT) figures, to identify locations to audit.
- **Local agency maintenance/project programming schedules:** Project schedules and lists regularly updated by LPAs within a region should be cross-referenced with priority safety lists to better coordinate the inclusion of safety treatments in existing projects.



STEP 2: SELECT RSA TEAM

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STEP 2: SELECT RSA TEAM

The success of an RSA is largely dependent upon the combined professional expertise of individuals comprising an RSA team. Generally consisting of 4-8 qualified experts and including individuals from varied professional backgrounds, the RSA team is the driving force behind reviewing the performance of the RSA location, identifying safety issues, and translating those issues into appropriate countermeasures.

RSA Team Composition

In addition to the team leader (typically from the MPO or RTPO facilitating the audit), it is imperative that an RSA team be made up of individuals from a broad array of disciplines that relate to transportation safety. This multidisciplinary approach allows for pertinent safety issues to be addressed through critical thought and discussion. The team should also include a representative of the project owner: the agency which maintains the road(s) at the RSA location (generally the LPA). It is important that an RSA team be comprised of professionals experienced in several core disciplines:

- **Geometrics:** Transportation Engineer/Planner, Roadway Designer
- **Operations:** Signals Specialist
- **Safety:** ODOT DSRT Representative, Regional Transportation Safety Analyst, Local Safety Specialist

If possible, potential RSA team members with multiple areas of expertise should be selected. Additional specialists can be added to the RSA team to focus on factors specifically tied to the audit location. The review of preliminary RSA location data and characteristics can inform the selection of these individuals representing expertise from supplemental disciplines.

Several examples are as follows:

- **Maintenance:** Maintenance Foreman
- **Enforcement:** Law Enforcement Personnel
- **Emergency Response:** EMS, Law Enforcement Personnel
- **Local Stakeholders:** Daily Roadway User, Area Resident, Local Business Owner
- **Other Specialists:** Pedestrian/Bicycle Specialists, Bridge Engineer, Materials Engineer, Public Transit Operator, Utility Representative

The number of individuals on an RSA team will vary based on the identified location's size, scope, and characteristics. Federal Highway Administration (FHWA) guidance surrounding RSAs states that "the best practice is to have the smallest team that brings all of the necessary knowledge and experience to the process." This allows for a logistically efficient RSA to be carried out without compromising the multidisciplinary nature of transportation safety.

Additional Considerations:

Law enforcement personnel can provide critical insights into the day-to-day operations of the site and any concerns they may have regarding existing safety issues or potential improvements. However, they may have limited availability to join in team meetings and/or field reviews. Be sure to provide enough advance notice to all team members to ensure participation, and be prepared to document their input during any in-person meetings. Designate a note-taker for all meetings and field reviews.



STEP 3: CONDUCT START-UP MEETING

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STEP 3: CONDUCT START-UP MEETING

A Start-Up Meeting sets the stage for an RSA by bringing together RSA team members to discuss the audit scope, review location information and data, identify opportunities and constraints, and outline preliminary safety concerns. Roles and responsibilities of RSA team members are discussed and a schedule for the remainder of the RSA process is determined.

Pre-RSA Packet and Information Review

Pre-RSA Packets are intended to assist all RSA team members in gaining a comprehensive understanding of the selected location and to prepare the team for a review of the location in the field. At a minimum, the packet should include an overview of current site conditions and context, crash data and a crash diagram, aerial imagery and/or land use maps, and other background information relevant to the RSA process. In addition, it might be helpful to have crash density maps, typical roadway cross-sections, and site photography available.

It is the responsibility of the RSA team leader to compile all site information included in a Pre-RSA Packet and ensure its distribution to team members before the Start-Up Meeting. During the Start-Up Meeting, team members complete a thorough review of resources available within the Pre-RSA Packet, focusing on when and where safety issues are arising. This can occur through both individual review sessions and as open discussions among team members.

To observe the site holistically, it is important to consider all current and potential users of the selected roadway and the varied professional perspectives of individuals comprising the RSA team. In order to keep the meeting focused, it is recommended that team members restrict comments to relevant safety concerns and avoid discussions surrounding roadway aesthetics or amenities. Safety concerns that arise out of a thorough review of Pre-RSA Packet materials should be noted for verification during a Field Review (refer to Step 4).

Field Review Considerations

Given the potentially constrained schedules of members of the RSA team, it is important to make the most of time available at the identified site. In some cases, more than one field review may be needed. Compiled information and data can inform specific locations of focus within a site during a Field Review and provide time-of-day considerations for Field Review scheduling. Pre-RSA Packet elements can assist in this process:

- **Temporal crash statistics:** Illuminating the when of observed safety issues, crash data summarized by time-related attributes (day-of-week, hour, light condition) can assist in the scheduling of Field Review(s). Certain days or hours that experience a disproportionate frequency or severity of crashes can be singled out for potential Field Review scheduling. If Field Reviews are unable to occur during one of these peak periods, it is recommended that video logs of a site be used as a supplement to a Field Review at a non-peak time (contact the Ohio Local Technical Assistance Program (LTAP) or ODOT task order consultant for assistance or equipment).
- **Crash data maps:** Maps displaying crash data can assist in the RSA team's understanding of where location-specific safety issues are occurring. Crash density or "heat maps" highlighting the clustering of crashes (or specific crash types/severity) help inform locations of focus for RSA Field Reviews. If available, site-wide crash diagrams can display all relevant location-specific information and provide the highest level of detail.

Moving Forward

Various roles to be performed by RSA team members during a Field Review should be delegated prior to the completion of a Start-Up Meeting. In addition to team members' professional expertise relating to the RSA process, administrative roles, such as the individuals responsible for taking notes and collecting photographs, should be assigned ahead of the field review.

It is important for the RSA team leader to reiterate the RSA process scope and objectives throughout the Start-Up Meeting and ensure that project timelines and Field Review schedules are finalized. Any opportunities and constraints observed in a review of the Pre-RSA Packet or brought forth by RSA Team members and/or the local public agencies involved should be discussed and noted. The Start-Up Meeting should ensure that open lines of communication are maintained between members of the RSA Team, the local public agencies involved, and the ODOT DSRT.



STEP 4: **PERFORM** **FIELD REVIEWS**

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STEP 4: PERFORM FIELD REVIEWS

The physical, or field, review of the RSA location affords RSA team members the opportunity to establish a first-hand understanding of a roadway's safety issues. Field Reviews are essential in gaining further insight into a roadway's characteristics, verifying safety concerns identified in prior steps, and identifying additional issues that have not yet been brought to light.

Initial Preparation

While Field Reviews are intended to provide an opportunity for the RSA team to broadly observe a location's characteristics, reviews should be tailored to focus on items of interest or concern that would have been identified during the Start-Up Meeting and within the Pre-RSA Packet. In addition to considerations established through review of the Pre-RSA Packet, Field Review preparation should include the organization and compilation of other necessary materials and equipment (several examples are shown at right). Such equipment ensures the safety of the RSA team while in the field and allows for proper collection of relevant data. Optional materials, such as measuring wheels, levels, and speed guns, can assist in making observations relating to specific items discussed during the Start-Up Meeting. Adequate transportation to and from the RSA location must also be arranged for all RSA team members.

Recommended Materials & Equipment:

- Pre-RSA Packet
- RSA Prompt List
- Camera(s)*
- Safety Vests*
- Hard Hats*
- Measuring Wheel (optional)*
- Level (optional)*
- Speed Gun (optional)*

**This equipment is available through the ODOT LTAP Center.*

In The Field

When performing a review of roadway characteristics in the field, it is imperative to observe the location holistically and from as many user perspectives as possible. At a minimum it is recommended that RSA team members drive and walk the site in its entirety. While gaining a clear picture of safety issues relating to the site overall is key, it is important to focus on any safety concerns that have arisen out of prior steps in the RSA process. This allows for a targeted and efficient review of site characteristics. Any observations to be discussed further among RSA team members or to be included within a finalized RSA report should be collected through note-taking or photography.

To aid in note-taking while in the field, RSA prompt lists are used to collect observations and thoughts in an organized manner. Prompt lists provide a starting point when observing roadway elements during an RSA Field Review. The following pages provide a sample prompt list constructed around the Geometry, Operations, Roadway Users, and Environment (GORE) model of roadway assessment.

- **Geometry:** Roadway elements related to the geometric design of the existing roadway, such as roadway curves, gradient, roadway cross section, clearance, sight distance, and clear zones.
- **Operations:** The manner in which the road is utilized and how effective current operational practices are at preventing or mitigating crashes. Elements assessed in this category are primarily processes such as congestion, signing, signal operation, speed management, queuing, and turning movements.
- **Roadway Users/Human Factors:** The various travel modes present along the roadway and the potential conflicts that may exist between them. Possible roadway users include pedestrians, bicyclists, motorcycles, trucks, and standard automobiles. It is imperative that the perspectives of all roadway users are considered when completing the Field Review.
- **Environment:** Performance of a roadway under various environmental conditions, such as differing weather patterns and lighting scenarios. To observe how a roadway performs under different conditions, it is recommended that auditors visit the site during different times of day and/or under different types of weather conditions.

RSA Prompt List

The following pages contain a prompt list with roadway elements and corresponding considerations arranged by GORE element. The listed considerations are intended to help RSA team members observe a site holistically, and are non-exhaustive and optional, as needs and applicability vary by location. To most effectively use the prompt list, take the time to review it prior to the Field Review.

BACKGROUND INFORMATION:	
Reviewer Name:	Date:
Organization Name:	Title:
RSA Location:	
To:	From:
General Notes:	

RSA Prompt List

Geometry: Roadway elements related to the geometric design of the existing roadway, such as roadway curves, gradient, roadway cross section, clearance, sight distance, and clear zones.

GEOMETRY:		
Element:	Considerations:	Observations:
Curves	Are there curves present along the site?	
	Is there visibility around the curve?	
	Is the speed limit around the curve appropriate?	
Gradients/ Slopes	Do roadway gradients/slopes promote unsafe vehicular movements?	
Cross Section	Is the number or width of lanes appropriate for current usage?	
	Is there a median? Does it have a safe design? Would a median be helpful?	
	Is there adequate utility clearance?	
Clearance	Are there low clearance segments on the roadway? Are they adequately signed?	
Sight distance	Is sight obstructed at any points while driving (by bushes, buildings, etc.?)	
Access Management	How many driveways are present along the site?	
	Does the number of drives cause for conflicts on the road or dangerous turning movements?	
Other Notes:		

RSA Prompt List

Operations: The manner in which the road is utilized and how effective current operational practices are at preventing or mitigating crashes. Elements assessed in this category are primarily processes such as congestion, signing, signal operation, speed management, queuing, and turning movements.

OPERATIONS:		
Element:	Considerations:	Observations:
Congestion	Are there points of congestion on the road segment during (non) peak traffic times?	
Signal Operation	Do the current signal timings effectively manage traffic?	
	Are the signal backplates retroreflective?	
	Are clearance intervals appropriate?	
Speed Management	Does the speed along the road segment seem appropriate?	
	Have measures been taken to ensure that speed limits are obeyed?	
Queuing	Is there an area where excessive queuing occurs?	
Signage	Is there too much/little signage?	
	Is the signage faded?	
	Are signs retroreflective?	
	Is there appropriate wayfinding signage?	
Turning Movements	Are provided turn lanes appropriate for current traffic volumes?	
Markings	Are the markings retroreflective?	
	Are the road markings clear and recognizable?	
Other Notes:		

RSA Prompt List


Roadway users/human factors: The various modes present along the roadway and the potential conflicts that may exist between them. Possible roadway users include pedestrians, bicyclists, motorcycles, trucks, and standard automobiles. It is imperative that the perspectives of all roadway users are considered when completing the Field Review.

ROADWAY USERS/HUMAN FACTORS:		
Element:	Considerations:	Observations:
Motorists	Are there skid marks on the pavement?	
Bicyclists	Can motorized traffic see cyclists along the road?	
	Are there separated bicycle facilities?	
	Within the ROW, where are cyclists riding?	
Pedestrians	Do you feel safe walking through this corridor as a pedestrian?	
	Is enough time given for pedestrians to cross the street?	
	Are there enough crossing opportunities along the corridor? Are there adequate opportunities for crossings at transit stops?	
	Do the driveways create slopes too dangerous for pedestrians with mobility devices? (Are they ADA compliant?)	
Others	ie. Public transit users, motorcyclists, pedestrians with assistive devices, etc.	
Unique Site Context	Do roadway characteristics seem appropriate in consideration of the site's unique context? ie. adjacent land use or points of interest	
Other Notes:		

RSA Prompt List

Environment: Performance of a roadway under various environmental conditions, such as differing weather patterns and lighting scenarios. To observe how a roadway performs under different conditions, it is recommended that auditors visit the site during different times of day and/or under different types of weather conditions.

ENVIRONMENT:		
Element:	Considerations:	Observations:
Weather	Does site drainage appear to be adequate?	
	Is there ponding along or at curb ramps?	
	Is sun glare an issue?	
Lighting	Is adequate lighting provided throughout the corridor?	
Road Conditions	Is the surface even and free from grooves, rutting, and potholes?	
Other Notes:		



STEP 5: CONDUCT ANALYSIS AND PREPARE REPORT

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STEP 5: CONDUCT ANALYSIS AND PREPARE REPORT

In this step, you will prioritize observed safety issues and identify implementable countermeasures that address these issues to improve the roadway's safety. Typically these are documented in an RSA analysis report.

The RSA Analysis Worksheets on the following pages are constructed around the GORE model of roadway assessment. The worksheets help to organize notes following the Field Review; document and prioritize observed safety issues; and translate observed issues into implementable countermeasures. The completed worksheets may serve as an outline to conduct the RSA analysis and draft the report.

RSA Analysis Worksheet: Observed Safety Issues & Prioritization

Using the risk rating matrix as a guide, estimate the risk of each observed safety issue on an A-F scale. This is intended to be a qualitative assessment of risk based on expected frequency and severity of the observed issue.

GEOMETRY:	
Issue:	Risk Rating:
OPERATIONS:	
Issue:	Risk Rating:
ROADWAY USERS/HUMAN FACTORS:	
Issue:	Risk Rating:
ENVIRONMENT:	
Issue:	Risk Rating:

RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D

RSA Analysis Worksheet: Prioritized Safety Issues

SAFETY ISSUE #1:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

SAFETY ISSUE #2:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

RSA Analysis Worksheet: Prioritized Safety Issues

SAFETY ISSUE #3:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

SAFETY ISSUE #4:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

RSA Analysis Worksheet: Prioritized Safety Issues

SAFETY ISSUE #5:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

SAFETY ISSUE #6:				
OBSERVATION:				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:				
Medium:				
Long:				

RSA Analysis Worksheet: Summary of Safety Recommendations

Recommendations for addressing observed safety issues outlined in the preceding pages are to be summarized below. Specific recommendations to be included in an HSP abbreviated safety funding application should be noted.

PRIORITIZED SAFETY RECOMMENDATIONS:		
Time Frame:	Recommendations:	HSIP Eligibility:
Short:		
Medium:		
Long:		

Conduct RSA Analysis

RSA team members' observations must be translated into the recommendation of implementable countermeasures with the potential to address observed safety issues. The risk associated with each safety issue is estimated; observed safety issues are prioritized based on estimated risk; and countermeasures are recommended that address the prioritized issues. This process is outlined below:

- **Observe Safety Issues and Estimate Risk:** All safety issues observed by the RSA team through the Pre-RSA Packet or Field Review should be listed and organized by the corresponding GORE elements. The risk of each observed issue can be estimated on an A-F scale using the risk rating matrix provided in the RSA Analysis Worksheets. The risk rating matrix provides a qualitative assessment of risk based on the expected frequency and severity of the observed issue (Figure 4).
- **Prioritize Safety Issues:** Observed safety issues should be ranked from highest to lowest estimated risk. Consideration should be given to issues that could potentially be addressed with near-term, low-cost countermeasures. Based on these factors, the top five prioritized safety issues are selected for more thorough review.
- **Establish Recommended Countermeasures:** Using the ODOT Highway Safety Improvement Program (HSIP) Eligible Countermeasures and [FHWA Proven Safety Countermeasures](#) lists as reference, short-, medium-, and long-term recommendations should be made to best address the top prioritized safety issues.

EXAMPLE:

SAFETY ISSUE #1:				
Lack of Pedestrian Accommodations				
OBSERVATION:				
Lack of pedestrian accommodations presents a serious safety concern along the corridor. Two pedestrians were struck and killed while walking along the roadway...				
RISK RATING MATRIX:				
Frequency:	Severity:			
	Negligible:	Low:	Medium:	High:
Frequent:	C	D	E	F
Occasional:	B	C	D	E
Rare:	A	B	C	D
RECOMMENDATIONS:				
Short:	HOLD for short term recommendation			
Medium:	HOLD for medium term recommendation			
Long:	HOLD for long term recommendation			

Figure 4. The risk rating matrix provides a qualitative assessment of risk based on the expected frequency and severity of the observed issue.

HSIP Eligible Countermeasures

HSIP will typically fund approved safety improvements at 90% of cost using federal funds. The remaining 10% must be met with a match by the LPA. Maintenance-related items are not eligible for HSIP funding consideration. The following items are eligible for 100% HSIP funding when approved as part of a safety improvement project:

- Pavement Markings
- Installation of Traffic Signs
- Signals
- Traffic Lights
- Barriers and End Treatments
- Breakaway Utility Poles
- Traffic Controlled Signalization
- Roundabouts

More information on eligible countermeasures and available task order resources can be found at the [ODOT HSIP webpage](#) and under [Title 23 of the United States Code](#).

Prepare RSA Report

The RSA Report is a formal and concise documentation of the relevant processes, observations, analyses, and recommendations set forth in Steps 1-4. Components should include elements of the Pre-RSA Packet, observations made during the Start-Up Meeting and Field Review, and the prioritized safety issues and recommended countermeasures established in the RSA Analysis. Photos, maps, and diagrams can be helpful to illustrate site characteristics or observed safety issues.

- The RSA Report should include:
- Identification of the RSA location
- Description of RSA team
- RSA process timeline
- RSA location overview and site characteristics
- Crash history and diagram
- Observed safety issues with risk estimation
- Prioritized safety issues
- Recommended countermeasures and HSIP funding considerations

The Federal Highway Administration maintains a library of RSA reports and other related resources on [its website](#).



STEP 6: PRESENT FINDINGS TO PROJECT OWNER

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STEP 6: PRESENT FINDINGS TO PROJECT OWNER

In this step, you will prioritize observed safety issues and identify implementable countermeasures that address these issues to improve the roadway's safety. Typically these are documented in an RSA analysis report.

The RSA Analysis Worksheets on the following pages are constructed around the GORE model of roadway assessment. The worksheets help to organize notes following the Field Review; document and prioritize observed safety issues; and translate observed issues into implementable countermeasures. The completed worksheets may serve as an outline to conduct the RSA analysis and draft the report.

Presentation Considerations

The RSA team should present findings objectively and in the context of the scope of the audit. The presentation should highlight safety successes before discussing opportunities for enhancements. Safety concerns should be specific; photos may be helpful. Constructively discuss issues and suggestions with the project owner and stakeholders. Be open to feedback while remaining independent and objective. Comments from the project owner may provide more information and allow the RSA team to clarify its findings and suggestions.



STEP 7: **PREPARE** **FORMAL** **RESPONSE**

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STEP 7: PREPARE FORMAL RESPONSE

Following the RSA findings presentation, the project owner and stakeholders should prepare a formal response to outline how they intend to address the safety concerns prioritized in the report. A letter signed by the project owner, or similar format, is an appropriate formal response.

The project owner may need to consider competing objectives in forming their response. This may result in a decision to disagree with or choose not to implement a recommendation from the RSA team. In such cases, it is advisable to request a valid reason for the decision to be documented in writing.



STEP 8: **INCORPORATE** **FINDINGS**

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STEP 8: INCORPORATE FINDINGS

The RSA team and project owner should ensure the response report, including any agreements regarding implementation, is documented prior to completing the RSA report. While this step formally concludes the audit, it is considered best-practice to debrief the process. Road Safety Audits present a learning opportunity for all involved. Ideally, both the RSA team and the LPA will have gained a better understanding of the principles of road geometry, operations, and human and environmental factors and their relationship to road safety.

No process is perfect; a debriefing allows the RSA team to think through opportunities to enhance the process for future audits. The Federal Highway Administration suggests considering the following questions as part of the debriefing:

- Was the RSA done at the correct stage?
- Would it have been more effective to conduct the RSA at an earlier stage where the safety issues could have been addressed in a more cost-effective way?
- Were the parameters established at the beginning of the RSA appropriate in meeting the desired objectives?
- Did the audit team get all of the data they required to conduct the RSA?
- Was enough time allocated for the RSA?
- Was the audit team timely in their response?
- Did the audit team satisfy the requirements of the RSA?
- Were the safety issues identified and suggestions made by the audit team responded to in an appropriate way and in a timely fashion?
- Is there any evidence that safety has been improved at the study location?