

## PART D - ROAD SAFETY AUDIT CHECKLISTS

Road safety audit checklists are provided on the following pages. They have been designed to assist you in your audits, but they are not a substitute for knowledge and experience. There is a set of checklists for each of the following stages of audit:

1. Planning (Feasibility) Stage
2. Preliminary Design Stage
3. Final (Detailed) Design Stage
4. Roadwork (Construction) Stage
5. Pre-opening Stage

### Using the Checklists

- Determine which set of checklists is needed based on the stage of audit you are doing.
- The checklists have been designed to be photocopied. Each copy may be used as a set of field sheets.
- Remember that a successful audit is not achieved by simply ticking off the checklist. The topics listed cover only the more common elements of design and practice; they are not exhaustive and auditors should use their own skills and judgement about the safety of any feature.
- If a listed topic is not apparently relevant to the project being audited, take a broad view of the topic to see if it prompts a relevant question.

Do not append the checklists to your audit report. Your audit report should contain sufficient explanation of its recommendations, without any need to refer to hand written notes on checklists.

<b>Planning stage</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
<b>1 Route choice</b>				
Is the project consistent with the adjacent network?				
Will all necessary turns (including U turns) be able to be made safely?				
<b>2 Road design standards</b>				
Are the design standards/or guidelines used “safe” (considering the project and its function)?				
Will sight distances be satisfactory – especially at intersections and property accesses?				
Will the design speed be “safe” with regard to horizontal and vertical alignment, sight distances, merging, or weaving?				
Will the likely operating speed on the proposed road be compatible with the design speed?				
<b>3 Cross section</b>				
Will the proposed cross section be “safe” for the expected volume and mix of traffic?				
Are all roadside hazards being managed “safely”?				

<b>4 Interchanges</b>				
Will the type of interchange be understood by drivers?				
<b>5 Intersections</b>				
Are the proposed layouts and traffic control as “safe” as practical for the type and volume of traffic?				
<b>6 Pedestrians, bicyclists and motorcyclists</b>				
Pedestrians and bicyclists – young, old, disabled? Have they been considered crossing the road, walking along the road? Do bicyclists have connectivity and clearance?				
Motorcyclists – will shoulders be sealed to provide them with lateral separation from faster vehicles?				
<b>7 General road safety issues</b>				
Will the road gradients be gentle enough to not require auxiliary lanes – such as truck lanes, overtaking lanes?				
Are there adequate locations along the road for trucks/ buses to safely stop – in case of breakdowns, or for driver rests?				
Will the new road be as safe as practical given the local weather (sunrise, sunset, dust storms, and wind)?				
Is the project free of all “visual deceit”? (Refer to Part C of this field guide).				

<b>Preliminary design stage</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
<b>1 Vertical and horizontal alignment</b>				
Will horizontal and vertical alignments be safe and consistent, especially at interchanges and intersections?				
Will all merge, diverge and weaving areas be “safe”?				
<b>2 Visibility and sight distance</b>				
Are sight and stopping distances adequate?				
Is the design free of sight restrictions (maybe due to crash barriers, parking, signs, structures or landscaping)?				
<b>3 Staged or future works</b>				
If the scheme is to be constructed in stages, are the stages arranged to ensure maximum safety?				
If the scheme is a stage towards a wider road or a dual carriageway highway, will this be clear to drivers? (Always look for misleading things that could confuse drivers)				
Is the transition between single and dual carriageway (either way) handled safely?				

<b>4 Interchanges</b>				
Are all features of the interchange design “safe”?				
<b>5 Intersections</b>				
Is the type of intersection (cross roads, T, roundabout, signals) appropriate and safe?				
Is the proposed intersection control “safe”?				
<b>6 Cross section</b>				
Will the proposed cross section be “safe” for the expected volume and mix of traffic?				
<b>7 Roadside hazards</b>				
Has the 5 step roadside hazard strategy been followed (refer to page – of this field guide)?				
Will crash barriers be provided only where necessary?				
Will approved “safe” terminals be used for the crash barrier?				
<b>8 Pedestrians, bicyclists and motorcyclists</b>				
Are pedestrian needs safely considered? (To cross the road, and to walk along the road?) (Refer to Part C of this field guide).				
Does the design safely provide for motorcycles and bicycles?				

<b>Preliminary design stage (cont.)</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
Are bus stops located where they will be safe and well used?				
<b>9 Road maintenance vehicles</b>				
Will road maintenance vehicles be able to work safely on this new road?				
<b>10 Drainage</b>				
Will the road be well drained?				
<b>11 General road safety considerations</b>				
Will the new road be as safe as practical given the local weather (sunrise, sunset, dust storms, wind)?				
Is the project free of all “visual deceit”? (Refer to Part C of this field guide)				

<b>Final design stage</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
<b>1 Horizontal and vertical alignment</b>				
Will horizontal and vertical alignments be consistent with “safe” visibility requirements?				
Is there adequate provision for “safe” overtaking?				
<b>2 Typical cross sections</b>				
Will lane widths, shoulders, medians and cross sections be adequate for the function of the road?				
Will median widths be adequate and safe for pedestrians, for turning vehicles (sheltered turns) and for road furniture (signs and signals)?				
Is provision made for broken down vehicles, and emergency vehicles?				
<b>3 New / existing road interface</b>				
Will the transition from old road to the new scheme be “safe”?				
<b>4 Staged or future works</b>				
If the scheme is to be constructed in stages, are the stages arranged to ensure maximum safety?				
If the scheme is a stage towards a wider or dual carriageway is the design adequate to clearly impart this message to drivers? (Always look for misleading things that could confuse drivers)				
Is the transition between single and dual carriageway (either way) handled safely?				

<b>5 Interchanges</b>			
Are sight lines open and free of obstruction at all merges and diverges?			
Will the distances between decision making points be sufficient for safety?			
Is the signing scheme for each interchange clear and easily understood?			
<b>6 Intersections</b>			
Is the type of intersection (cross roads, T, roundabout, signals) appropriate and safe?			
Will the design be free of sight obstructions (due to crash barriers, fences, landscaping, parking or other obstructions)?			
Will the traffic signal control at the intersection(s) be clearly seen and understood? Will the signal phasing be "safe"?			
Is adequate time proposed for all traffic and pedestrian movements at the signals?			
With roundabouts, is adequate deflection provided?			

<b>Final design stage (cont.)</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
<b>7 Adjacent Land</b>				
Will all accesses to and from adjacent properties be “safe”?				
<b>8 Roadside hazards</b>				
Has the 5 step roadside hazard strategy been followed? (Refer to Part C of this field guide).				
Will crash barriers be provided only where necessary?				
Will approved “safe” end terminals be used for the crash barrier?				
<b>9 Pedestrians, bicyclists and motorcyclists</b>				
Are pedestrian needs safely considered? (To cross the road, and to walk along the road?). (Refer to page – of this field guide).				
Does the design safely provide for motorcycles and bicycles?				
Are bus stops well positioned for safety?				
<b>10 Signs, line marking and delineation</b>				
Are all signs (regulatory, warning and direction) in accord with the 6 C’s? (Refer to Part C of this field guide).				
Are sign supports out of the clear zone, or frangible?				

Is good delineation (curve warning signs, advisory speed signs, guide posts and chevron alignment markers) provided where required?				
<b>11 Parking</b>				
Is the parking that is to be provided adequate and safe?				
<b>12 Emergency service vehicle access</b>				
Has provision been made for safe access and movements by emergency vehicles?				
Are median breaks on divided carriageways safely located? (I.e. frequency, visibility)				
<b>13 Lighting</b>				
Is lighting required and if so, has it been adequately provided?				
Are frangible or slip-base poles to be used? (Refer to Part C of this				
<b>14 Drainage</b>				
Has the design provided adequate drainage?				

15 General road safety considerations				
Is the new road as safe as practical given the local weather (sunrise, sunset, snow, fog, storms, wind)?				
Is the project free of all “visual deceit”? (Refer to Part C of this field guide).				
Is the road surface free of gravel and sand, and with good skid resistance?				

<b>Road work (Construction) stage</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
<b>1 Compliance with the Road Safety at Road Works Field Guide</b>				
Does the Traffic Management Plan (TMP) for the road works comply with the requirements of the Road Safety at Road Works Field Guide?				
Does the TMP show the 4 zone concept being correctly applied?				
<b>2 New / Existing Road Interface</b>				
Is the connection of the new road and the old road as safe as practical?				
<b>3 Interchanges</b>				
Are sight lines open and free of obstruction at all merges and diverges?				
Are the distances between decision-making points sufficient for safety?				
Is the direction signing scheme for each interchange clear and easily understood at the expected operating speeds?				
<b>4 Intersections</b>				
Are sight lines to/from the intersection clear?				
Are traffic signals conspicuous, functioning properly?				

<b>5 Roadside hazards</b>			
Has the 5 step roadside hazard strategy been followed? (Refer to Part C of this field guide)			
Are all crash barriers correctly and safely installed?			
<b>6 Signs, line markings and delineation</b>			
Do all signs and pavement markings satisfy the 6C's of good signage and line marking practice? (Refer to Part C of this guide)			
Is there a need for any more signs to warn, inform, guide, control or delineate?			
Have all old signs and markings been removed?			
Is the speed zone safe, and clearly signed?			
<b>7 Pedestrians, bicyclists and motorcyclists</b>			
Is there safe provision for all pedestrians motorcyclists and bicyclists through this project?			
<b>8 General road safety considerations</b>			
Is the road surface free of gravel and sand, and with good skid resistance?			

<b>Pre-opening stage</b>				
<b>Issue</b>	<b>Yes</b>	<b>No</b>	<b>N A</b>	<b>Comments</b>
<b>1 Visibility</b>				
Are sight lines free of obstructions?				
<b>2 New / Existing Road Interface</b>				
Is the connection of the new road and the old road as safe as practical?				
<b>3 Interchanges</b>				
Are sight lines open and free of obstruction at all merges and diverges?				
Are the distances between decision-making points sufficient for safety?				
Is the direction signing scheme for each interchange clear and easily understood at the expected operating speeds?				
<b>4 Intersections</b>				
Are sight lines to/from the intersection clear?				
Are traffic signals conspicuous, functioning properly?				

Are pedestrian signals easy to see and with adequate crossing time?				
Are roundabouts visible and recognisable from all approaches?				
<b>5 Roadside hazards</b>				
Has the 5 step roadside hazard strategy been followed? (Refer to Part C of this field guide)				
Are all crash barriers correctly and safely installed?				
<b>6 Signs, line markings and delineation</b>				
Do all signs and pavement markings satisfy the 6C's of good signage and line marking practice? (Refer to Part C of this guide)				
Is there a need for any more signs to warn, inform, guide, control or delineate?				
Have all old signs and markings been removed?				
Is the speed zone safe, and clearly signed?				
Is all delineation and road marking visible and readily visible?				