



Rural Roads

A GUIDE FOR QUICK IDENTIFICATION OF SERIOUS ENVIRONMENTAL, HEALTH, AND SAFETY (EHS) CONCERNS RELATED TO RURAL ROADS ACTIVITIES

About the Visual Field Guide Series

Visual Field Guides are intended for use during field visits by USAID and implementing partner staff.

They are intended to ensure that the most common serious environmental deficits in activity design and management are quickly and easily identified for corrective action.

The field guides complement the more detailed guidance found in USAID's Environmental Guidelines: www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices.

For the Visual Field Guides landing page, go to www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/visual-field-guides.

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A. PROBLEMS—PRE-CONSTRUCTION: A **YES** answer to any of the following indicates that the proposed route presents higher than normal environmental or social risks. The route must be changed OR these risks must be addressed in design and pre-construction environmental review. Notify the Chief of Party and Agreement/ Contracting Officer's Technical Representative (A/COTR).



A1. Does the proposed/existing route traverse steep inclines or broad, flat floodplains? Does it cut across contour lines more than it follows them?

Issues: Can channel water and result in significant damage to the slope, adjoining lands, and the road itself. Flooding can destroy or significantly shorten the life of the road and present safety and livelihood risks to communities depending on the road.

The top photo depicts routing across a broad floodplain. The bottom photo depicts a road cutting into a steep slope.



YES
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NO

A2. Does the route pass through or close to relatively non-degraded forests, wetlands, or protected areas?

Issue: Can directly damage valuable natural resources and even "open up" high-value areas for unsustainable exploitation. Such areas provide biodiversity and/or other "ecosystem services" (e.g., flood control, breeding habitats).



YES
—
NO

A3. Are homes, schools, or clinics immediately adjacent to the proposed route?

Issue: Can adversely impact the quality of life of nearby inhabitants, including interfering with the learning environment in schools and posing health risks to clinic patients.



YES
—
NO

A4. Will construction on the proposed/existing route require demolition of houses or shops? Will it require destructing agricultural fields?

Issue: Displaces inhabitants and deprives owners/users of agricultural land, resulting in significant social impacts if not addressed via compensation, resettlement, or negotiation.

The photo depicts a route in a rural area. Improving this road on its current route would require the demolition of both houses and agricultural fields.



YES
—
NO

Minimum Appropriate Personal Protective Equipment (PPE)

Use this checklist to answer Question B4. If you answer “YES” to **any** of these questions, or if the PPE appears new or unused, answer “YES” to B4. (Note: you will probably not be able to evaluate all questions during a short visit.)






<p>Hard Hats Do you see <u>any</u> workers NOT wearing a hardhat in an area or at a task where flying debris may be generated (e.g., demolition) or there is a risk of tools or materials falling from head height or higher?</p>	<p>YES NO</p>
<p>Footwear Do you see <u>any</u> workers wearing only foam flip flops or no shoes at all?</p>	<p>YES NO</p>
<p>Do you see <u>any</u> workers engaged in excavation, demolition, or working around heavy equipment, and NOT wearing safety toe boots?</p>	<p>YES NO</p>
<p>Respiratory Protection Is the construction supervisor unable to give you a two-strap N-95 dust mask on request?</p>	<p>YES NO</p>
<p>Do you see <u>any</u> workers mixing Portland cement NOT wearing a two-strap N-95 dust mask?</p>	<p>YES NO</p>
<p>Hearing Protection Do you see <u>any</u> workers using power tools or working close to power tools NOT wearing hearing protection?</p>	<p>YES NO</p>
<p>Safety Glasses Do you see <u>any</u> workers engaged in demolition, grinding, cutting, or using power tools, or working in close proximity to these operations, NOT wearing safety glasses?</p>	<p>YES NO</p>
<p>Reflective Vests Do you see <u>any</u> workers working near roads or heavy equipment or engaged in demolition NOT wearing a reflective vest?</p>	<p>YES NO</p>

NOTE: USAID contractors must comply with any applicable host country occupational health and safety standards. Failure to implement these minimum practices may indicate significant non-compliance with any host country requirements.

B. PROBLEMS—CONSTRUCTION MANAGEMENT:

A **YES** answer to any of these questions indicates a deficit that will require corrective action. Notify the Chief of Party and A/COTR.



<p>B1. Are “mining” materials, such as fill, sand, or gravel, being extracted from waterways or ecologically sensitive areas? (Check stream crossings as you travel the road.)</p>	<p><i>Issue: Degrades water quality, ruins critical habitat, alters drainage and flow, and can create standing water.</i></p> <p>The photo depicts a creek where in-stream gravel mining caused erosion and stopped flow.</p>		<p>YES NO</p>
<p>B2. Are there fuel, oil, paint, or chemical spills on the ground or in streams?</p>	<p><i>Issue: Can poison soils, surface waters, and groundwater.</i></p>		<p>YES NO</p>
<p>B3. Do construction camps lack improved latrines and/or handwashing stations? (Note: simple open-pit latrines are NOT adequate.)</p>	<p><i>Issue: Increases likelihood that workers practice open defecation, increasing risk of disease spreading along the fecal-oral route. Simple open-pit latrines allow the spread of fecal pathogens by flies and other disease vectors.</i></p> <p>The photo depicts an open-pit latrine that lacks a handwashing station.</p>		<p>YES NO</p>
<p>B4. Is PPE inadequate or does it appear new or unused? (See Minimum Appropriate PPE sidebar.)</p>	<p><i>Issue: Prevents PPE from fulfilling its intended function: helping protect workers against injuries and disease.</i></p> <p>The photo depicts workers wearing unscuffed hardhats and boots, indicating that this PPE was put on specifically for the site inspection.</p>		<p>YES NO</p>
<p>B5. Are hand laborers engaged in unrelated tasks in close proximity to vehicles/heavy equipment? Are there passersby?</p>	<p><i>Issue: Increases risk of injury. Hand laborers should only work in close proximity to vehicles and heavy equipment if they are engaged in a task related to the operation of that equipment (e.g., workers with shovels assisting excavation by backhoe) or closely monitoring the operation.</i></p>		<p>YES NO</p>



Blasting?

While it is not typical to use explosives in rural road construction, it is sometimes necessary, especially in challenging terrain. Legal procurement, safe and secure transport and storage, and safe use are essential.

This Visual Field Guide **DOES NOT ADDRESS BLASTING SAFETY.**

If explosives are being used, verify whether the activity's Initial Environment Examination (IEE) or Environmental Assessment (EA) authorizes their use, and whether the activity is strictly observing their requirements.

If the IEE or EA does not authorize the use of explosives, or if the IEE or EA requirements are not being met, immediately notify project management, the A/COTR, and Mission Environmental Officer. Work should be suspended immediately until compliance can be assured.

“Responsible Contracting” Employed?

Socially and environmentally responsible construction contracts help reduce and remedy EHS deficits on road and other construction sites. Such contracts mandate EHS compliance/good practice and establish EHS performance as a key element of project performance (tied to compensation).

If use of this Visual Field Guide results in a need for follow-up with the Chief of Party or A/COTR, ask them if the construction contract embodies these principles.

If it does not, make use of the opportunity to educate project management or the A/COTR regarding this aspect of construction good practice.

B6. If the road is in active use during construction, does it lack flaggers and protective signage in the work areas?

Issue: Increases road workers' risks of injury or death caused by vehicles.

The photo depicts a road construction site that lacks signage or a flagger. Road workers are at risk from traffic approaching over the blind crest of the hill.



YES
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NO

B7. Are there schools or clinics immediately adjacent to the road? Are they affected by construction noise and dust?

See Issue in Question A3.

YES
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NO

C. POTENTIAL PROBLEMS: A **YES** answer to any of these questions indicates a deficit that will require corrective action. Notify the Chief of Party and A/COTR.



C1. Is there standing water on or immediately beside the road? Is there evidence of such water even if it is not there now?

Issue: Indicates inadequate and/or poorly maintained drainage structures, shortening the life of the road, and usually leading to erosion and destruction of adjacent lands.

Standing water is also a disease risk, as it may breed insect disease vectors, particularly mosquitoes.



YES
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NO

C2. Is there gulying at the roadway edge, around culverts, or in adjacent lands?

Issue: Indicates poorly designed and/or inadequately maintained drainage structures. Gulying can permanently degrade adjacent land (including agricultural fields) and shorten the life of the road.



YES
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NO

C3. Are borrow pits full of water? Is there open access to unrestored OR active borrow pits?

Issue: Increases risks of both drowning and disease.

Because borrow pits can easily fill with water, most should be decommissioned and remediated after construction. If a limited number are retained, access should be restricted and there should be no standing water. Borrow pits retained as dry-season impoundments should be shallowly sloped to reduce drowning risks.



YES
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NO

Visit a Clinic (or Two)

If possible, visit one or more clinics that serve communities serviced by the road.

- ▶ If the road was rehabilitated and/or widened, ask if staff have seen a significant increase in pedestrian-vehicle accidents since the improved road entered service.
- ▶ If the road is newly constructed, ask if pedestrian-vehicle accidents account for a significant portion of patients or fatalities in the area.

Consider whether signage and “traffic calming” measures—such as speed bumps or speed limit enforcement—are adequate or could be strengthened when the road passes through built-up areas or by schools.

- ▶ Also ask whether road dust or noise adversely affects patients/clinic operations.

If the answer is “yes” to any of the questions above, alert the Chief of Party or A/COTR for follow-up.

Consider whether noise/dust barriers, including live plantings, may be feasible and appropriate.

Visit a School (or Two)

If schools are in close proximity to the new/improved road, try to visit one or two of them.

- ▶ Ask if road noise and dust disrupts classroom learning.

If yes, alert the Chief of Party or A/COTR for follow-up.

Consider whether noise/dust barriers (including live plantings) and reduction measures (such as speed bumps to slow traffic and thus reduce dust) may be feasible and appropriate.

- ▶ Also, observe if there is any physical barrier between the road and school grounds—a ditch, a wall, guardrail, live fencing, etc.

If not, construction of a physical barrier should be required, unless school buildings AND play areas are set back from the road.

<p>C4. Is one side of the road much wetter than the other?</p> <p><i>Issue: Indicates that the road is significantly interfering with drainage patterns. This may create flood risks, deprive agricultural lands of water, and disrupt local hydrology and ecosystems.</i></p> <p><i>The photo depicts a road with heavier vegetation on one side, indicating wetter conditions there.</i></p>		<p>YES — NO</p>
<p>C5. Is waste, including spills and/or debris, evident in road camps or former road camp sites?</p> <p><i>Issues: May pose physical hazards (e.g., rusty metal), create breeding habitats for disease vectors, and impede the reuse of the site. Contamination from fuels or lubricant spills can poison soils, ground, and surface water.</i></p> <p><i>The photo depicts solid waste at a construction site. The contractor is responsible for cleaning up such waste prior to the road handover.</i></p>		<p>YES — NO</p>
<p>C6. Is there evidence of uncontrolled charcoal production or logging in areas close to the road? (Check the side of road for charcoal bags and logs.)</p> <p><i>Issue: Indicates that the road may contribute to uncontrolled forest resource exploitation, with potentially significant adverse impacts on these high-value ecosystems.</i></p> <p><i>The photo depicts bags of charcoal stacked next to a rural road.</i></p>		<p>YES — NO</p>
<p>C7. Are clinics or schools immediately adjacent to the road AND affected by road noise and dust or traffic? (See Clinic and School sidebars.)</p> <p><i>See Issue in Question A3.</i></p> <p><i>The photo depicts a school that is immediately adjacent to a road. There is no physical barrier separating the road and the school.</i></p>		<p>YES — NO</p>
<p>C8. Is the new or improved road resulting in a significant number of/increase in serious vehicle-pedestrian accidents? (See Visit a Clinic sidebar.)</p> <p><i>Issue: Can increase dangers to pedestrians, as new or improved roads support higher traffic speeds and car volumes.</i></p>		<p>YES — NO</p>