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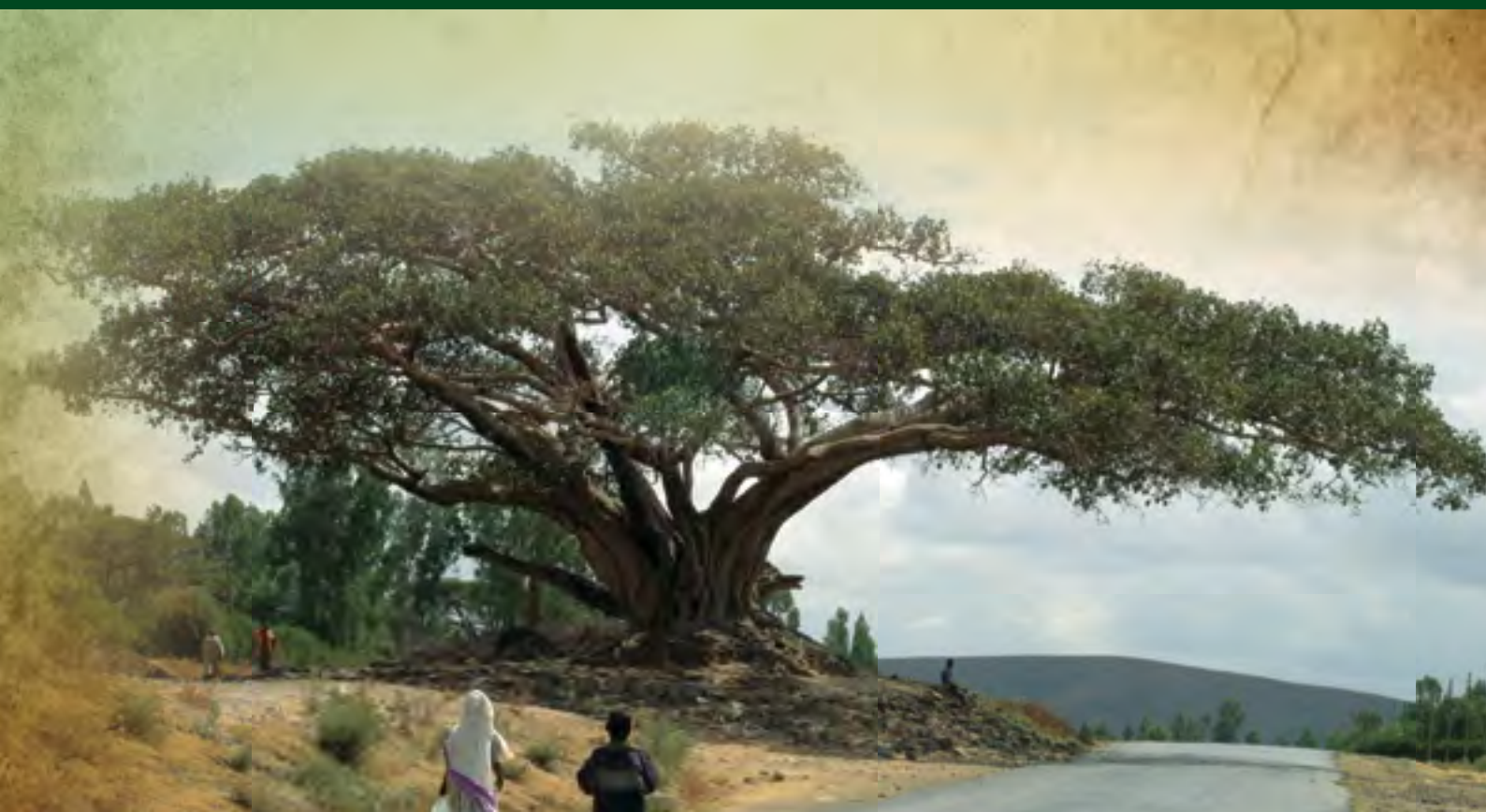
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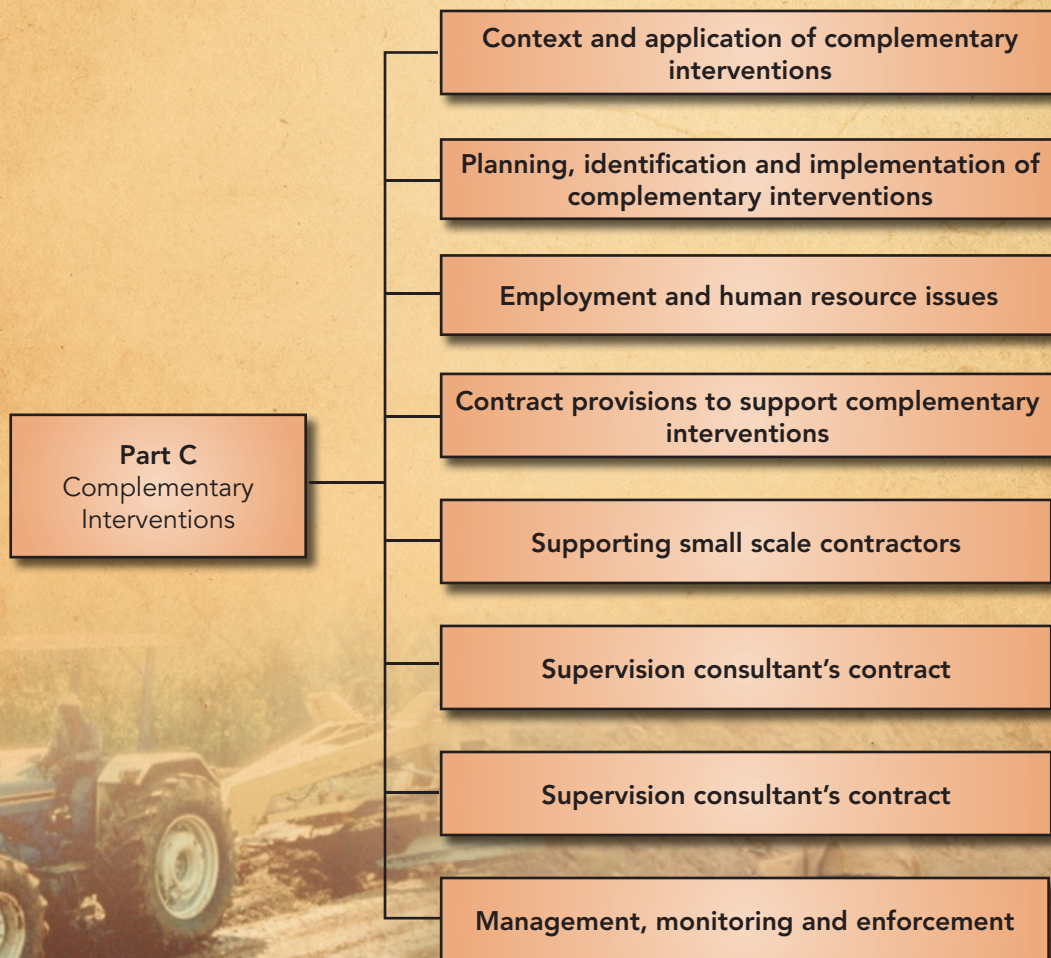
**DESIGN MANUAL FOR LOW VOLUME ROADS
PART A, PART B AND PART C**

FINAL DRAFT, APRIL 2011



Part C

COMPLEMENTARY INTERVENTIONS





C

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1. CONTEXT AND APPLICATION OF COMPLEMENTARY INTERVENTIONS

Part C describes some concepts and practical issues relating to the planning, design and implementation of potential complementary interventions on low volume road projects.

Complementary interventions are:

- Actions that can, if desired, be included in and implemented through the roads project or the road works contract;
- Targeted toward the communities that lie within the influence corridor of the road and are affected by the road itself, by road users or by the road works;
- Intended to optimise the benefits brought by the road and to extend positive, and mitigate negative, impacts of road projects on local communities;
- Not mandatory. They are included at the discretion of the client;
- Not designed to remove or replace the responsibilities of the contractor, client or other authorities or institutions.

The concept of complementary interventions is motivated by opportunity. In its simplest terms complementary interventions take advantage of the presence of the road project to build in aspects that will enhance the social, environmental and safety situation of communities affected by the road. These are additional to the normal social, environmental and safety obligations of the contractor and do not replace or share the contractors normal obligations.

The opportunity to take advantage of complementary interventions will only be available during the period of the works and when the contractor is on site. As such, any initiative or series of actions planned under a complementary interventions umbrella is short term.

As mentioned, complementary interventions are not mandatory. Any action will have a cost consequence, which will be borne by the client, unless other arrangements are made. The extent to which the client wishes to include complementary interventions within a project would be communicated to the design engineer through his terms of reference or by site instruction. In some cases, forward thinking contractors may wish to absorb all or part of such costs as a good will gesture. This can be reflected in the bill of quantities.

Complementary interventions are opportunistic and reflect the presence of a road contractor in the project area for a certain period of time. The contractor will have access to physical, human and financial resources that may not normally be readily available in the project area.

The presence of the contractor and road contract provides a rare opportunity to widen the positive impacts of the road project for little additional cost or effort. A contractor will mobilise skills, materials, plant, labour and supplies and will have access to substantial transport mechanisms. Without major disruption to the contractor's programme of works, it may be possible to make some of these resources available to the communities affected by the road project.

Existing Federal, Regional, Wereda and Kebele structures and administrations are central to the successful application of the complementary intervention approach. If complementary interventions are to be included in the works, the relevant administrations must have been communicated with at the feasibility stage of the project and have agreed in principle the extent, type and approach for any inclusion of actions and initiatives (Appendix C.1). Complementary interventions are demand driven, reflect the needs expressed by local communities themselves, and are agreed through normal institutional structures and plans. This may also require the beneficiary community adding some additional effort and resources.

With an outline framework, agreed at the feasibility stage, the task of the design engineer is to materialise these desires and agreements into the works bidding documents and eventual contract.

Part C aims to explain the concept of complementary interventions, provide examples of the types of intervention that may be provided, and explain how the detailed design and bidding documents should be used to clearly define the requirements for implementation, measurement, and monitoring.

Complementary interventions can be grouped into three categories:

- Cat.I) **Management Interventions** – simple actions that enhance the road project itself and are well within the normal skills of the road contractor. These aim to improve the wider impacts of the project itself and build on or extend the normal socio-environmental and safety obligations of the contractor.
- Cat.II) **Opportunity Interventions** – actions that are beyond the scope of traditional road projects but are within the technical and management skills of the road works contractor.
- Cat.III) **Enhancement Interventions** – actions that utilise the provisions of the contract but extend beyond the normal skills and experience of road works contractor. These actions would normally be implemented by other parties with the relevant skills.

One of the main advantages for including complementary interventions through a contractor already mobilised for a road project is that they can be completed far more quickly, efficiently and at a lower cost than if implemented separately. By minimising the transaction costs, more can be achieved for less. Not only does it bring more benefits to the local community, it improves the economic rate of return on the road investment and, depending on the type of actions, can improve the prospect for local socio-economic growth and empowerment.

2.

PLANNING, IDENTIFICATION AND IMPLEMENTATION OF COMPLEMENTARY INTERVENTIONS

2.1

Planning

Complementary interventions need to be considered early in the project development (Appendix C.1) and be an integral part of project planning, from project identification to feasibility study. It is important that the client and key stakeholders (for example those who identify the need for the project and local authority representatives in the project area) work together to develop an outline plan for inclusion of complementary interventions in the road project/programme to a sufficient level of detail for their further development during the feasibility study and detailed design.

The outline plan and budget for complementary interventions, and an assessment of the potential impacts, should be included in the economic analysis of road projects as they may raise the economic rate of return of the road investment, despite any initial additional costs.

Key issues for consideration during the planning, feasibility and preliminary design stages of a project are considered more fully in Appendix C.1.

When approaching the design of complementary interventions it is necessary to consider actions that:

- Are demand driven;
- Are agreed in principle by all of the relevant local and other authorities;
- Will have a high level of participation and involvement from the local authorities and communities during implementation (See Plate C.1.1);
- Are matched with and complement actions within existing local plans, such as, Wereda development plans.



Plate C.1.1: Community participation meetings

In developing a detailed design for complementary interventions it is essential that the design engineer works through the client and with the right local institutions and structures. The client will use existing consultation frameworks, structures and plans to be advised on the identification and development of any proposed complementary interventions.

For detailed design a high level of consultation with affected communities will also be needed. The design engineer will work through the client to ensure that the correct local procedures are adopted and that the right formalities are followed. Decisions, prioritisation methods and approvals for planned initiatives would be introduced by the client and achieved through the clients interaction with the existing and appropriate local level structures. The client may require the design consultant to assist with the identification and prioritisation process. Where this occurs the design engineer will need to communicate with local authorities and communities. If identification and prioritisation are within the design consultants mandate these should be carried out under the clients guidance and using participatory processes.

Participation considerations

In promoting consultations and participation the following should be noted:

- Beneficiaries should not be viewed as a passive element. Beneficiaries should be active participants.
- Situations should be avoided that override existing and legitimate decision-making processes and structures
- Due care and attention should be given to group decision-making processes that may reinforce existing power structures at the expense or exclusion of vulnerable groups.

Effective participatory decision making processes have already been developed on many rural infrastructure projects and integrated development projects in Ethiopia and within client road organisations (e.g. ERTTP 2003). The design consultant should refer to the guidelines for these projects and participatory approach manuals from other line ministries (MoFED, 2006) in developing their own detailed methodology for identification and selection of complementary activities for each low volume road project.

The design engineer should also be familiar with existing local and regional development plans, potential sources of complementary financing or resources that may be allocated to the complementary activities, willingness of local communities to make other contributions, work by local NGO and CBO. Typically, consultations and participatory decision making may involve the following organisations:

Federal level	Regional level	Wereda level	Kebele level
ERA: Planning & ICT Directorate; Regional Directorates Rural Roads Technical Support Branch; and Environment Branch Ministries: Ministry of Transport; Ministry of Agriculture Federal Transport Authority	Regional Roads Authority: General Manager or Regional Road Engineer Regional Transport Authority: General Manager Bureaus: Regional Bureau Heads, Administrators and Sectoral chiefs	Wereda Administrations: Wereda Development Committee, Administrator and Wereda Sector Department/office chiefs Wereda Road Desk: Wereda Road Desk Engineer and Public Works Engineer	Kebele Administrations: Kebele Administrator, Kebele Development Committee. Kebele Development Units and cooperatives. NGO and CBO.

The consultant, with guidance from the client and key stakeholders, may be required to help establish and provide support to a 'Complementary Intervention Oversight Committee' at the different levels. These would become the main contact points for the design consultant and may assist in the community consultation and participatory decision making processes. If the establishment of a separate committee is not required, a main contact point within the existing local administration would need to be nominated or identified through the client.

The participatory process will require a multi-disciplinary design team to ensure an appropriate consideration of technical and financial aspects of the proposals identified, to develop appropriate

designs and implementation mechanisms that meet the expressed needs of the communities, and to ensure adequate coverage in the construction contracts.

Environmental and social safeguard requirements

Complementary interventions are about creating opportunities through road project contracts to further enhance the positive impacts of low volume roads. They are not about mitigating or minimising negative impacts brought about by the road project. The requirements for assessing and addressing Environmental and Social Safeguards during project planning, design and construction are clearly addressed through other existing documents. These documents, and their subsequent revisions or replacements, should be followed where appropriate.

A current list of the relevant existing documents is maintained by ERA and is available from ERA or the ERA website. www.era.gov.et

2.2

Identification and selection of complementary interventions

In theory, complementary interventions may include almost anything that can be implemented through a road works contract and which contributes to the socio-economic, environmental or safety of communities affected by the road. They have been divided into three categories to help clarify the different types of activities and how they relate to the traditional role of the road works contractor or works contract.

Category I - Management interventions

The works contractor will already have clear cut environmental, safety and employment obligations set out under the provisions of the works contract. These would be captured within the relevant design and implementation management documents (including EIA and EMP). Management interventions add to and extend the normal obligations of the contractor. These could include interventions such as items relating to improving road and resident access; reinstatement/improvement of areas used temporarily during construction; or provision of facilities and services disrupted by construction activities. These activities would be included as Bill of Quantity items (Measured Works) in the contract. These small scale activities could be captured within other items or provided directly as a contribution by the contractor.

Category II – Opportunity interventions

Opportunity interventions go beyond the normal scope of a road works contract, but which are within the technical and management skills of a road works contractor. Opportunity interventions could include support for provision or repair of community infrastructure (such as a clearance of a market area); or provision of material, labour or supplies for small community works such as rehabilitation or repair of community facilities (community buildings, hand pumps, irrigation infrastructure and the like). Provision of technical training to Wereda and Kebele administrations and staff by the contractor is also possible (eg vehicle maintenance; financial management; road construction and maintenance; building and/or sanitation management). Similar technical support could also be provided to local enterprises and cooperatives. These activities would be included as Bill of Quantity Items (Measured Works) in the contract or could be established through a separate or parallel agreement between the contractor and the Wereda/Kebele Administrations or with the community.

Category III – Enhancement interventions

Enhancement interventions extend beyond the skills and experience of a normal road contractor and would require specific arrangements through the contract with other skilled parties. Such parties may include local government offices, NGOs, private sector organisations, community based organisations and cooperative societies who are better placed and skilled to implement the proposed interventions. The role of the contractor would be to manage the activity through the contract and provide physical support, if necessary or appropriate, provide financing to the organisation implementing the activity to include such activity under monthly site reporting, and to present the activity for payment through his normal certificate for payment. Verification of activities would be undertaken by the supervising consultant or client. Such activities could include awareness raising and education campaigns; establishment of

new or improved livelihoods options; building of facilities; life skills training; or provision of supplies and training to local service providers. These activities would be included as provisional sums in the contract.

As well as dividing complementary interventions into three categories, they can also cover a range of themes; for example road safety, road corridor environment, road transport services, and community development. Appendix C.2 shows some indicative examples of complementary interventions by category and theme.

3.

EMPLOYMENT AND HUMAN RESOURCE ISSUES

Road works provide an opportunity for temporary employment. Employment opportunities can be maximised by promoting labour (Plate C.3.1) or the use of intermediate equipment (Plate C.3.2) rather than employing heavy equipment technologies.



Plate C.3.1: Promotion of labour-intensive methods



Plate C.3.2: Promotion of intermediate technology option

The client will guide the design engineer on any special emphasis with regards the approach to be adopted. It is reasonable to assume that for the foreseeable future a mix of labour and intermediate equipment approaches will be favoured for provision of community, wereda and some regional roads.

The principles of complementary interventions can be used to enhance access to employment opportunities for the wider community, where unemployment or under-employment are local issues. Road works can provide paid employment opportunities and such opportunities should be used as far as possible for the local people.

There are many unskilled and semi-skilled works activities that could easily be carried out by the local people and with little training. Employment of local people also provides a mechanism for training and support under Category II and III type interventions that relate to skills development and future income generating activities.

Typical activities include:

- Crushing and screening rock for aggregate or hand screening gravels;
- Grubbing and clearing;
- Digging ditches and foundations;
- Making gabion baskets;
- Seedling and sapling planting and maintenance;
- Cooking, cleaning, and managing work sites and camps.

The contract should include employment clauses and provisions that require or provide an incentive to the contractor to use local labour as much as possible. Typical contractual mechanisms may include, for example, minimum targets for percentage of labourers on specific activities employed from local communities. Payment for the relevant activities would reflect the extent to which the employment targets have been met. This should also be a topic for review at monthly site meetings.

More simply, an overall target can be set in terms of person-days worked either as a total or percentage of the total by local people. Again payments would reflect the extent to which the target has been met.

When developing such clauses, or enhancing existing clauses, the following issues should be given due consideration:

- Boundaries for defining local labour – eg living within a designated number of kilometres from the project road; or living within certain administrative areas;
- Availability of skilled and semi-skilled labour within the project area, and within sections of the road project;
- General health and physical condition of the locally available labour (especially in areas where there is significant out-migration for work, drought, food insecurity or endemic health issues);
- Social, religious or traditional barriers that may prevent some social groups from accessing labour opportunities and how these might be overcome;
- Incentives or penalties to be used to encourage the contractor to meet local employment targets;
- Measurement, monitoring and recording mechanisms to accurately report on local employment.

The design consultant will need to carry out a labour survey during the detailed design stage to develop appropriate local employment contract clauses and targets that accurately reflect conditions along the project corridor.

3.1 Encouraging participation of marginalised groups

Every society has groups that are, for whatever reason, disadvantaged or excluded from participation in employment. Often these groups can benefit most from temporary employment in road works projects.

Typically excluded groups include:

- Women in general and especially mothers with young children;
- Physically or mentally disadvantaged;
- Ethnic or religious minorities;
- HIV/AIDS affected or infected.

It has to be recognised that the labour required on the road site usually requires physically hard work and construction sites can be relatively dangerous places. It is not, therefore, appropriate to require contractors to employ physically or mentally disadvantaged people, though there are of course some jobs, for example at the works camp, that could be appropriate.

It should be possible for the design engineer to develop an understanding of the barriers to participation in employment by women and minority groups, and find ways to help them access employment - without causing conflict or concern amongst the wider community (Plate C.3.3).

In many areas, for example, barriers to women's participation in road works is caused by their own need to collect water, fire wood, animal fodder and look after the home and children.



Plate C.3.3: Participation of women in road works

- Measures that can be easily introduced to help women overcome such barriers include:
- Allowing women to form work groups and share the work load between them. This provides for flexible working hours for individual women and protection in numbers. This also allows them to share child care responsibilities through a rotating crèche or similar.
- Ensuring women work in areas where they feel safe and secure – due consideration should be given to issues of isolation (eg distance from other work groups), appropriate areas or facilities for nature calls and distance from home/crèche.
- Removal of time constraints preventing women from accessing employment opportunities. This can be done by, for example, providing firewood or alternative fuel or potable water through the contract. This would require the contractor to bring fuel or potable water to site for distribution. In some cases this could also be used as part of payment for work done (by men as well as women). Importantly, it should only be part payment.

3.2 Meeting existing obligations

There are already existing legal requirements relating to employment of temporary labourers defined by the Ministry of Labour and social affairs that should not be neglected in the contract (see Box).

In general, contract clauses should include provisions that ensure:

- Minimum wage rates per unit of time or unit of work are adhered to;
- Equal pay for equal work;
- Equal access to employment opportunities (taking into account local traditions, with respect to male / female jobs, for example);
- Effective monitoring and recording of work done and wages paid (transparency);
- Health and safety of employees and affected communities (due attention to sanitation, waste disposal, disease control and prevention, first aid and emergency health care, accident management and reporting);
- Safe and appropriate temporary accommodation and recreational facilities;
- Effective grievance procedures for temporary employees;
- Limitations on use of child labour (according to local laws, regulations and customary practices);
- Use of ILO guidelines and regulation if it is an internationally funded contract.

4.

CONTRACT PROVISIONS TO SUPPORT
COMPLEMENTARY INTERVENTIONS

The key to successful implementation of complementary interventions will be ensuring that clearly defined requirements and adequate provisions are included in contract documents and at all stages of the project. The following sections describe how the different contracts (for project design and supervision services and works) may be used to address complementary interventions.

4.1

Design services contract

During project planning, the client will need to determine the approximate budget and scope of the project, including the budget and scope for complementary interventions. This then needs to be reflected in the Request for Proposals (RFP), in particular the terms of reference, for consulting services for the detailed design. The RFP should specifically include appropriate inputs of key personnel with the requisite skills to meet the requirements of the client with regards complementary interventions.

The client may require the consultant to undertake some participatory approach to assist with the development of the complementary intervention package. With regards to Category III interventions, it would be far more efficient and appropriate for the client to undertake the identification and preliminary selection using the existing appropriate government structures and plans.

The development of Category I and II intervention packages are relatively straight forward and easily within the skill area of a multi-disciplinary design team. However, the RFP still needs to be well developed and thought out (see Box).

The feasibility study will have developed the preliminary options and budget/cost estimates for the complementary interventions. The detailed design will require preparation of the finalised list of complementary interventions, detailed designs and engineers cost estimates.

The RFP should include:

- Clearly defined and appropriate inputs for key personnel to be involved in developing complementary interventions;
- Reference to this Part C or alternative guidance on identifying, selecting and designing complementary interventions;
- Requirement for organisation of a mobilisation workshop that draws all stakeholders together on site;
- Requirement to review participatory decision making practices and develop project specific methodology that best reflects local decision making structures (formal and informal);
- Clearly defined duties and responsibilities of the parties to the contract and any external organisations with respect to development of the complementary interventions;
- Requirement to review national, regional and local development plans in the development of complementary interventions;
- Requirement to include complementary interventions in any further economic analysis;
- Requirement to consult with local government and community representatives to enable them to participate effectively in the decision making process when developing complementary interventions;
- Requirement to clearly define and specify requirements for complementary interventions in the preparation of bidding documents.

The RFP may require the consultant to provide guidance on:

- How to decide which potential CIs will be the most effective or efficient use of resources and how this can be measured;
- How to ensure that the contractor does not become overburdened by complementary interventions; that the proposed interventions are suitable to the scope of works; and provide guidance on the anticipated experience and skills of the contractors to be procured.

4.2

Works Contract

For the purposes of including Complementary Interventions within works bidding documents (See Table C.4.1 for guidance), the key documents requiring attention are:

Instructions to Bidders (ITB) and the Bid Data Sheet (BDS): For a LVR project the client should include an additional item that will draw the attention of the bidder to any requirements for complementary interventions.

Standard Technical Specifications: The Standard Technical Specifications form a separate volume in the ERA 2011 series. These capture some of the proposed interventions mentioned in Series 11000 Ancillary Works. Other complementary interventions should be included in the Particular Specification.

Particular Specifications: This is where any detailed technical requirements and specifications, and implementation mechanisms specific to the designed set of complementary interventions should be clearly defined for the project.

Bills of Quantities or Schedules of Rates: This should be linked by item number to the Standard Technical Specifications and to the Particular Specifications; and is where the schedule of activities and estimated quantities for the complementary interventions are set out for the bidder to price.

Drawings: Some standard detailed drawings may be applied directly eg provision of trail bridges. Supplementary drawings, linked with the Particular Specifications, may also be required where new or special complementary approaches are included. Where trail bridges are included within the contract, as a complementary intervention, a separate volume of drawings is provided. For Category III interventions reference should also be made to any standard drawings used by line ministries for infrastructure under their control.

Conditions of Contract: This includes standard provisions for execution of the contract and unless amended in the Conditions of Particular Application, these will apply. In some cases modification of some clauses may be required to reflect the desired approach and will need due consideration. For example, where there is a desire to support small and medium enterprises and small scale contractors then due consideration should be given to the clauses referring to Performance Security, Performance Program, Insurances, Cash Flow, Plant, Equipment & Workmanship, Payments, Retention and Advances, Price Adjustment and currency restrictions.

Conditions of Particular Application: This is where any Provisions in the General Conditions of Contract may be amended, as required, to make them more appropriate. This may apply to some of the complementary intervention envisaged. Where assets are involved, the document should be clear on the responsibilities for asset transfer. Due consideration should also be given to strengthening clauses aimed at promoting sub-contracting/assignment; local employment and conditions (particularly for women); rights and insurances; and for strengthening complementary interventions.

Important documents which are not part of the Works Contract are the User Guides. These are guidelines to the design Consultant or the client organisation on the preparation of the Works Bidding documents and include reference to provision of complementary interventions.

The main issues for a contractor are to fully understand the scope of all of the works, including the complementary interventions, and the fundamental issues of measurement and payment.

The main issue for the client is to achieve the objectives of the intervention, to get value for money and for these interventions not to require a disproportionate amount of supervision or monitoring.

Table C.4.1: Works bidding/contract documents

General Notes for Guidance	
Instructions to Bidders (ITB) and the Bid Data Sheet (BDS)	The ITB is generally a standard document which may vary depending on the procedures of different clients. For a low volume road project the client should include an additional item that will draw the attention of the bidder to the low volume road approach. The BDS is linked to the ITB and provides specific project information.
Standard Technical Specifications	These will define the scope of the technical requirements of the contract, including the type and quality of materials and equipment, the standards of workmanship. The Standard Technical Specifications form a separate volume in the ERA 2011 series. The ERA Standard Technical Specifications includes the works to be undertaken, general obligations information on the format of Bill Items for the Bill of Quantities, on item coverage and the method of payment.
Particular Specifications	This is where any detailed technical requirements and specifications, and implementation mechanisms specific for the project, should be clearly defined. Particular technical specifications add further detail to complement or replace those stated in the Standard Technical Specifications. The particular technical specification should also include any specifications and limitations on the freedom of choice for the contracting company related to the execution of works.
Bill of Quantities	This should be linked by item number to the Standard Technical Specifications and to the Particular Specifications; and is where the schedule of activities and estimated quantities are set out for the bidder to price.
Drawings	Some standard detailed drawings may be applied directly for low volume roads works (eg cross-sections, standard culvert design and road signs). Supplementary drawings, linked with the Particular Specifications, may also be required where new, innovative or special approaches are included.
Conditions of Contract	This includes standard clauses or provisions for contracting requirements, obligations and legal commitments which, unless amended in the Conditions of Particular Application, will apply for the project. In some cases modification of some clauses will need due consideration and modification may be required to reflect the desired approach for the low volume road works (see below).
Conditions of Particular Application	This is where any Provisions in the General Conditions of Contract may be amended as required, to make them more appropriate to non-standard project requirements, including complementary interventions.
User Guides	These documents will provide detailed guidelines to the design consultant on the preparation of the works bidding documents.

4.2.1 Options for inclusion of Complementary Interventions in Works Contracts – Measurement and Payment

Many complementary interventions will involve provision of work items, activities or services beyond the usual core activities associated with a traditional road works contracts.

Bill of Quantity Items (Measured Works)

Where the scope and detailed design of a complementary intervention is well defined and within the scope of activities normally expected of a road contractor (ie Category I and II interventions), the preferred

option would be to include these activities as items within the Bill of Quantities for the contractor to price. This approach would apply to any extension and an example of typical entries is provided in Table C.4.2.

Table C.4.2: Example Bill of Quantities entries

No	Item Description	Unit	Quantity	Rate	Amount
1*	Clear and prepare hard standing for market, in accordance with Specification Ref: (.....) and Drawing: (.....)	m ²	500		
2*	Rehabilitate school block in accordance with Specification Ref: (.....) and Drawing: (.....)	Item	1		

Note:

* Item No. relates to item in Standard Technical Specifications or Particular Specification. Shaded area for bidder to price

Provisional Sums

If the intervention is not fully developed and agreed (eg enhancement of temporary works areas such as borrow pits to small dam or fish pond; or provision training if it is outside the scope of activity normally expected of the contractor in some category II and III interventions), then it is probably better to describe the activity briefly and to include a 'Provisional Sum' item in the Bill of Quantities.

What information is known could be included in the Particular Specifications or Drawings, with a requirement for the Contractor and/or Supervision Consultant to further develop and define the intervention later. Generally the Provisional Sum Item is only one or two lines included in the Bill of Quantities. A 'cost estimate' is inserted by the Client to cover the cost of these items.

The provisional sum is an estimated cost for the intervention based on the information available at the time of bidding document preparation. The actual cost of the intervention may change, with the final design and price for the intervention being agreed between the parties to the contract once all the necessary information is known.

Provisional Sums are flexible and are used 'at the discretion' of the Employer Engineer.

When using provisional sums, provision must be made for the administration and management of these funds by the contractor, in the form of a % fee or adjustment to the provisional sum item.

An example of Provisional Sum entries in the Bill of Quantities is shown in Table C.4.3.

Table C.4.3: Example of Provisional Sum entries

No	Item Description	Unit	Quantity	Rate	Amount
1*	Provision of road maintenance training to Wereda staff	PS			125,000
	Allow percentage for administrative fee on provisional sum, item (....)	%	1		
2*	Provision of construction supplies to Kebele Administration	PS			75,000
	Allow percentage for administrative fee on provisional sum, item (....)	%	1		

* Item No. relates to item in Standard Technical Specifications or Particular Specification. Shaded area for bidder to price

Output Related Items

Output related approaches are most applicable for procurement of supplies or services. Measurement and payment will normally include stages and be linked with outputs or 'deliverables' (eg an activity report following a training programme). If the Terms of Reference are complete for such an intervention then bill items can be included for the contractor to price, as in the example in Table C.4.4. If such information is not available to the contractor then the intervention should be included as a Provisional Sum item and an estimated cost included in the Bill of Quantities by the client.

Table C.4.4: Lump Sum item for completed output related to RS

No	Item Description	Unit	Quantity	Rate	Amount
1*	Provide Training Materials and deliver training Community and Schools Road Safety Education in accordance with Terms of Reference (Annex TBA)	Lump Sum	1		

*Item No. relates to item in Standard Technical Specifications or Particular Specification. Shaded area for bidder to price

Any items for supplies or services that are outsourced to appropriate implementation partners will require a detailed Terms of Reference to be developed and included in the sub-contract agreement. Such sub-contractors may be nominated by the client or selected by the contractor as a 'domestic' sub-contractor (the client would still need to approve the choice of sub-contractor). These ToR will need to clearly define the scope of work, identify the beneficiaries to be reached and set out the detailed specifications if the sub-contract is for supplies. For a services sub-contract the projected person month inputs and minimum staff requirements will be included. ToR should also include a payment schedule either based on inputs or, most likely, linked to deliverable.

Schedule of rates

This is a particular form of pricing mechanism that is used where the activities or procurement items are known, but the quantities are not (See Table C.4.5). The schedule lists the items to be provided giving the unit of measure but not the quantities, or if quantities are included it is made clear that such quantities are nominal. The bidder will then submit a rate (rate only) against each item in the schedule.

Table C.4.5: Example of schedule of rates where quantities are unknown

No	Item Description	Unit	Quantity	Rate	Amount
1*	Provide animal drawn carts in accordance with Specification Ref: (.....) and Drawing: (.....)	No	1		Rate Only

*Item No. relates to item in Standard Technical Specifications or Particular Specification. Shaded area for bidder to price

If standard unit rates are known then they can be inserted by the design engineer (See Table C.4.6) and will then normally form the basis of a nominated sub- contract. This could be used, for example, for the provision of school furniture from a nominated supplier, or a national procurement office, whose rates have already been agreed with the Ministry of Education. If such fixed rates are to be used they will generally include for contractor overheads and profit.

Table C.4.6: Example of Schedule of rates where quantities are known

No	Item Description	Unit	Quantity (Nominal)	Rate	Amount
1*	Provide school desks in accordance with Specification Ref: (.....) and Drawing: (.....)	No	50	100	5000.00

*Item No. relates to item in Standard Technical Specifications or Particular Specification

Dayworks

The dayworks schedule is intended for the pricing and payment for small scale 'incidental works' and should not be relied on as a mechanism for the measurement and payment of complementary interventions.

4.3

The Works Contract evaluation

Although the complementary interventions component of a road project may be a relatively small part of the construction budget, it must be included within the evaluation of the bid process. The aim should be to ensure that the contractor understands the complementary intervention requirements and has consulted with the relevant partners to provide considered and accurate price estimates.

5.

SUPPORTING SMALL SCALE CONTRACTORS

Promoting development of local small scale and emergent contractors and enterprises can be considered as a complementary intervention. This can be achieved in two ways:

5.1 Utilising the lower level bidding documents

The following lower level bidding documents are available:

- Standard Bidding Document for the Procurement of Minor Works – Maximum contract value USD3 Million
- Standard Bidding Document for the Procurement of Micro Works – Maximum contract value USD300,000

Smaller scale works contracts are more forgiving to the emergent contractor and protect the client from high levels of financial risk.

When contracting work to small scale contractors, small enterprises or community based organisations that are not so used to undertaking road related works, the following issues need to be considered and a position agreed with the client:

- It should be understood that emergent contractors may lack contract experience. The client and supervisor will need to be forgiving in some instances where full compliance with normal contract provisions could have a negative impact on bidding, the performance of the contract or the existence of the contractor.
- Ensuring the requirements of the contract, allocation of responsibilities, technical and performance standards, payment terms and conditions are clearly understood by the tenderer/contractor. The project could include elements of contract management and supervision support, technical assistance and/or management training.
- Cash flow: It is unlikely that small sub-contractors will have sufficient cash or resources to start the activity without some form of advance payment (in cash or in kind) and it is likely that they would need more frequent payments (eg bi-weekly rather than monthly).
- Advances: The advance amount, repayment conditions, and regular payments need to be defined in a payment schedule in the agreement. Advance guarantees used on larger contracts may not be appropriate or even possible for small scale works.
- Performance guarantees and bonds: It is mandatory to include performance guarantees for the works. Where small scale enterprises are sub-contracted, the main contractor guarantees will cater for the SME. Where SME are contracted directly, the provisions set out in the respective model tender/contract documents should be responsive to the size of the contract/contractor and to local constraints.
- Performance Programme: The period of the works should also take account of the likely size of the contractor and the approach adopted (labour, intermediate equipment, heavy equipment etc).

5.2 Utilising sub-contracting clauses

By utilising sub-contracting, risk is carried by the main contractor who has qualified and met the minimum criteria set by the client. The client may set a minimum percentage or type of works that should be sub-contracted to small scale enterprises. In doing so the client needs to recognise the risk that is carried by the contractor and to ensure that the performance programme and payment clauses recognise that the works contract has a capacity building component.

6.

SUPERVISION CONSULTANT'S CONTRACT

The Request for Proposals (RFP), in particular the Terms of Reference, for consultancy services for construction supervision need to reflect the role of the Engineer in supervising and administering payments for the complementary interventions.

As with the main engineering design, the supervision consultant will be required to review the agreed list and detailed designs of the complementary interventions, and to consult with the necessary stakeholders to ensure that priorities remain unchanged and that the interventions are still appropriate to the needs of the beneficiary communities.

The RFP also needs to take into account the need to further develop and negotiate detailed agreements for some of the interventions as the construction works progress, for example interventions relating to reinstatement or temporary works areas. The Employer will probably also need to be involved in monitoring grievances and dispute resolution, should the need arise. In such cases, the Engineer shall provide the required assistance.

The supervision and monitoring of complementary interventions is likely, to require specialist skills beyond the normal engineering supervision team. The RFP should reflect this, and should include:

- Clearly defined and appropriate inputs for key personnel to be involved in monitoring and supervising complementary interventions;
- Reference to this part C of the low volume design manual or alternative guidance on designing and monitoring complementary interventions;
- Clearly defined duties and responsibilities of the parties to the contract and any external organisations with respect to development and implementation of the complementary interventions;
- Requirement to consult with and provide appropriate training to implementation partners to assist them in fulfilling any obligations as defined in agreements / sub-contracts for complementary interventions;
- A requirement to include complementary interventions in their progress meeting agendas and progress reports.

7.

MANAGEMENT, MONITORING AND ENFORCEMENT

In general, the complementary intervention aspects of the contract should be managed monitored and enforced using the normal provisions of the contract documents.

Complementary interventions should be included in the contractors detailed work plan and the payment schedule. Progress and performance should be reported through the monthly site meetings and progress reports. It may be appropriate to prepare specific reports for local communities and their leaders on the progress of complementary interventions in their area. The frequency of such reports would depend on the nature and scale of complementary interventions being implemented in that area, which should be determined during the detailed design stage and uses provisions made in the reporting sections of the works and supervision contracts.

While it is the Contractors responsibility to manage and implement the complementary interventions according to the contract, it is the Engineer's responsibility to ensure complementary interventions are monitored regularly and that technical and performance standards are met.

Monitoring and enforcement should be closely linked to the contractors payments. It is essential that measurement and payment for complementary interventions and any incentives or penalties are clearly defined in the works contract.

Payment for sections of the road should only be fully paid once all aspects of the contract have been completed in that section. This includes completion of environmental mitigation measures and the complementary interventions, to the required standards. This should be reflected in the payment schedule. It may be worth using a form similar to the Environmental Clearance Certificate (see examples from ERA quality management system) for complementary interventions when processing payment requests, which makes provision for retaining a certain amount from the contractors payment to ensure that sufficient funds are available to the client to complete the mitigation measures/complementary interventions should the contractor fail to do so.

As the complementary interventions may involve small scale contractors or community groups, an element of community based monitoring should also be included. A mechanism should be established by which the affected communities are clearly informed about what is to be done and by whom, and to monitor implementation by all parties to the complementary intervention agreements. This can be done through formal monitoring groups, or by putting up information on a notice board that allows all members of the community to see what should be happening.

A mechanism for reporting on performance from the wider community would also need to be established. This could be through the appointment of a local inspector and/or contact person, or through supervision visits by the supervision consultant's team.

8.

REFERENCES



Ethiopian Rural Travel and Transport Programme, ERTTP (2003). Planning, Monitoring & Evaluation Manual, Volume 2. Ethiopian Roads Authority.

Ministry of Finance and Economic Development, MOFED (2006). Guidelines for the Preparation of Public Sector Projects. January, 2006.

APPENDIX C.1 - COMPLEMENTARY INTERVENTIONS – PLANNING, FEASIBILITY AND PRELIMINARY DESIGN STAGES

A) Key issues to consider during early planning stages

Complementary interventions need to be treated as an integral part of the planning process, in much the same way as environmental and social safeguards. Provision for them should be included in the long and medium term budgets to prevent them being removed due to inadequate budgeting or fund allocation.

The client should consult with key stakeholders during project identification stages. Key stakeholders at the early planning stage could include those who identified the need for the project and representatives from local administrations. The outcome of the consultations should be an outline or indicative plan for inclusion of complementary interventions in the road project/programme.

It is the responsibility of the client to decide on the extent of complementary interventions that are to be considered during feasibility study and prepare the outline plan. The outline plan should describe the category, type and scale of the complementary interventions to be developed further.

Road projects, by their nature, cover relatively long distances, cross many local administrative boundaries, and affect a number of different communities. Identification of complementary interventions is not therefore a simple task of consulting one community to identify their development needs and priorities, but requires consultation and negotiation with many communities – each with their own internal structures and cultures, needs and priorities; each group thinking another is being allocated a better 'share' than they are, etc.

The key stakeholders will be expected to have a deeper understanding of the beneficiary communities than the client, and should be able to provide guidance on the most locally acceptable means for engaging with local communities and appropriate participatory decision making methods.

The developing an outline plan the client should consider and provide guidance on the following issues:

- Is the client interested in including complementary interventions in the project?
- What category of complementary interventions are appropriate, bearing in mind the cost/budget, timeframe, scope and complexity of the project?
- How to define the boundaries of where complementary interventions can be implemented – area of influence of the road project?
- What proportion of the road project budget may be set aside for complementary interventions?
- How to determine the level of willingness of local authorities and communities to participate in development and implementation of complementary interventions?
- Who, at the local level, could best assist the client and his service providers to develop and implement the complementary interventions? Is there a need to establish 'Complementary Intervention Oversight Committees' or can existing committees or administrators take on this role?
- What are the best methods for raising awareness of the opportunities for, and identification and prioritisation of, complementary interventions? Eg large meetings or lots of small meetings with different groups? Which language(s) to work in? Who are participants and key speakers? How best to present information (in writing or pictures)? Which analysis and decision making tools are most appropriate? How to consolidate different needs identification and prioritisation results?
- What may be the best method for identifying and selecting the proposed complementary interventions – for example, forming a committee with representatives from regional and wereda levels to determine the shortlist? Or each wereda presents its shortlist to the consultant/client for consideration?
- Can key stakeholders, based on current local development plans and initial consultation with local authorities within the project area, develop an indicative list of potential complementary interventions?
- What additional funding or resources may be available from other sources to allocate to complementary interventions?

- To what level does the participation process need to extend? This partly depends on the budget and category of intervention agreed on for the specific project. It will also depend on the number and size of communities that live along the road.
- How is each community defined? What is the formal and informal structure for decision making purposes? Who are the key stakeholders – those likely to influence the decisions made and those likely to influence the success of implementation and sustainability of interventions?
- How to ensure vulnerable and/or excluded groups within a community are included in the participation process? (eg women, elderly, children, physically and mentally disadvantaged, ethnic or religious minorities, etc.)

B) Key issues to consider during feasibility study and preliminary design

During Feasibility Study, the consultant, with guidance from the client and key stakeholders, takes on the responsibility to further investigate the options for and develop preliminary designs and cost estimates for complementary interventions, based on the outline plan previously prepared.

The investigations at this stage are aimed at developing the complementary interventions to a sufficient level of detail to enable reasonably accurate cost estimates to be prepared and impacts to be assessed for complementary interventions. Complementary interventions are to be included as an integral part of the options analysis and economic analysis of the road project. Complementary interventions, despite involving additional costs, may well raise the economic rate of return of the road investment.

The Feasibility Study consultant will need to continue and expand upon the consultations already undertaken through a detailed participation strategy. Initial awareness should raise the outline road project to the local communities. Information to be given including the approximate timeframe for the project

- Potential route options (the final route selection may mean some communities do not fall within the road project corridor);
- Nature of the works;
- Potential for complementary interventions.

Following on from the awareness raising programme, the client or his representative, should work closely with the local authorities and communities to identify and prioritise the potential complementary interventions.

The detailed participation strategy will need to define how decision making may be devolved to the local level, whilst maintaining an overview and consistency in approach along the road project. It will need to clearly define decision making methodologies and allocate responsibilities for decision making at all levels.

The outcome of the identification and prioritisation process should be a list of potential interventions. Ideally, this should be presented as an impact analysis table, with each intervention having an estimated cost, an estimate of the number of people and extent of impact on different groups of people positively or negatively affected by the intervention, and an attempt at quantifying the benefits of the intervention. The location of potential complementary interventions and the intended beneficiaries should be clearly defined.

A preliminary or outline design will also be necessary at this stage to enable relatively accurate cost estimates for each potential complementary intervention. The consultant should also identify any sources of additional financing or resources that can be used to implement the complementary interventions. This could include funds coming from the Client through the road project contract, financing promised from other sectors or local authorities, contributions of labour or materials promised from local authorities and local communities inputs such as labour.

The local authorities, based on the guidance given by the client, should review the list of proposed interventions and select those which they propose for inclusion in the project. This will be a difficult task and needs to balance allocated budgets against meeting the prioritised needs of the most people in an

equitable manner. The decision making process must be transparent to minimise the potential for conflict and complaint.

Due consideration needs to be given by local authorities to the client on:

- How to divide the CI resources between different communities along the road?
- How to divide the CI resources among the different categories of CI? Is this defined in the policy or is it project specific?
- If interventions are to be demand driven – whose demands are more important? Are all groups equal? What are the implications for decision making and implementation? Are there any development policies that prioritise certain social groups or types of intervention?
- How to coordinate ideas of local communities with development plans of local authorities and higher level sector organisations (line ministries)?

It is likely that the final selection of complementary interventions will be an iterative process, to ensure ownership at all necessary levels. Conflict management between different groups of one community, between adjacent communities, between different sectors and authorities should be resolved by the appropriate Regional or next level up authorities.

The feasibility report should capture the selection methodology, analysis of potential complementary interventions and recommendations for those to be selected for inclusion in the project, along with an outline budget.

APPENDIX C.2 - INDICATIVE EXAMPLES OF CIS BY CATEGORY AND THEME

Theme	Category 1 Management Interventions	Category 2 Opportunity Interventions	Category 3 Enhancement Interventions
Road and Site Safety	<ul style="list-style-type: none"> Provide illumination/ additional marking in dangerous areas Extend provision or maintenance of access to specific services and facilities for pedestrians and IMTs Provide road safety education to employees Provide access to first aid training for community representatives and to facilities in emergency Rigorously enforce speed limits of equipment and plant 	<ul style="list-style-type: none"> Distribution of reflective strips for pedestrian, NMT and IMT road users. Provide boards warning community of construction and road hazards Provide refresher/first aid training for local health officials 	<ul style="list-style-type: none"> Road safety awareness : schools/community road safety education campaigns – Community theatre, TV and radio etc Provide Road Safety equipment, teaching aids or additional equipment
Road Corridor Environment (including climate change adaptation measures)	<ul style="list-style-type: none"> Provide temporary and permanent accesses to homes, tracks and paths Provide water and hand sprinkler systems to local communities to control dust on road sections near their properties as needed Reinstatement of diversion roads – consider transferring ownership for use by IMTs (particularly in busy/ dangerous areas) Reinstatement of temporary work areas – eg provide designs for utilisation of borrow pits to dams or fish ponds Provide opportunity for community to claim spoiled materials including wood from grubbing, topsoil or oversize Provide additional soil protection and road/structure erosion protection in vulnerable areas 	<ul style="list-style-type: none"> Plant productive (eg fruit, nuts, fuel) trees and plants along roadside and in reinstatement of borrow areas Establish landfill/waste management sites, utilising borrow and quarry areas where appropriate, or areas designated by local authorities Repair to areas suffering previous erosion or siltation damage Improve access to the road – access roads, trail bridges, footpaths Improve access from the road to local community facilities Provide road maintenance training eg to lengthmen (or other technical training) to local administrations/SME Rehabilitation and repair to community/village assets: roads, market areas, meeting areas, sanitation/ water supply facilities, drainage systems, etc. 	<ul style="list-style-type: none"> Establish nurseries for supply of trees and shrubs for bio-engineering, fruit orchards, wood lots etc. Provide protective tubing for saplings, covers for seedlings and water supply Extend productive planting to other areas identified by local community Support programmes to eradicate invasive plant species Supply fingerlings for borrow areas upgraded to fish ponds Build community/village assets – school rooms, health or veterinary posts, storage facilities, training/meeting rooms etc Utilise road drainage systems to provide water-harvesting facilities

Theme	Category 1 Management Interventions	Category 2 Opportunity Interventions	Category 3 Enhancement Interventions
Transport Services	<ul style="list-style-type: none"> Ensure adequate physical access for Pedestrian, NMT, IMT and normal RTS is maintained Provide adequate bus-bays and shelter 	<ul style="list-style-type: none"> Supply IMT to cooperatives/ associations Provide IMT maintenance training to cooperatives Provide technical skills training to local transport service operators Make available mechanical workshops for IMT/RTS repairs 	<ul style="list-style-type: none"> Provide awareness training on options for rural transport services Provide seed financing for establishment of rotating funds for supply and maintenance of IMT Provide animal husbandry training
Support Service Sectors	<ul style="list-style-type: none"> Provide vehicles and temporary emergency/ first aid services for local communities whose access to mainline services is hindered by the construction works Supply local health centres with ARVs, and other drugs relating to communicable disease control 	<ul style="list-style-type: none"> Provide HIV/AIDS testing and counselling services along the road corridor for construction workers and local communities Distribution of first aid supplies to health posts Assist with the repair, rehabilitation or maintenance of health and education facilities centres (incl. hospices & orphanages) 	<ul style="list-style-type: none"> Provide classroom furniture (desks and chairs) Promote use of ICT in schools through improved electrical and communications installations, provision of computers, etc. Provide mosquito nets and mattresses to orphanages, hospices and nurseries Provide support to initiatives supporting community education and awareness (health, safety, livelihoods and income generation) Provide water supply/ construct sanitation facilities for roadside communities
Community Development	<ul style="list-style-type: none"> Maximise employment opportunities for local communities, including women – provide crèche and other support facilities 	<ul style="list-style-type: none"> Provide advisory services to local administration with regards construction, rehabilitation or maintenance of community infrastructure Provide ground water recharge schemes, water harvesting or small micro-irrigation schemes Provide materials, equipment and training to support establishment and development of local SMEs Supply materials, equipment, labour, etc for community projects (eg pipes, cement, steel, timber, wiring, tractors, excavators, skilled labourers, etc) 	<ul style="list-style-type: none"> Provide office furniture, accommodation and sanitation facilities for community facilities Skills enhancement - Train casual and other local labourers (eg better livestock management; agricultural methods etc) Provide life skills training (eg literacy, numeracy, basic accounting, kitchen gardening, sanitation and hygiene, etc.) to local community groups and SMEs

Theme	Category 1 Management Interventions	Category 2 Opportunity Interventions	Category 3 Enhancement Interventions
Research, Demonstration and Training	<ul style="list-style-type: none"> ▪ Inclusion of Road Authority personnel on contractors team for professional training/ experience ▪ Inclusion of trial/ demonstration sections for new technical options 	<ul style="list-style-type: none"> ▪ Investigate different approaches to CI design and implementation to improve future provision and contract conditions ▪ Provide technical training to local mechanics, electricians, plumbers, carpenters, masons, etc. (eg through employment and maintenance at camp /work sites) 	<ul style="list-style-type: none"> ▪ Provide technical and management advice and training to local authorities and administrations on key issues