



# Trail Bridge Strategy 2006



His Majesty's Government

**Ministry of Local Development**

Srimahal, Pulchok

Lalitpur

## Disclaimer

This is an official translation of the Nepal Trail Bridge Strategy, 2062 from Nepali into English. The original version of the said document is in Nepali. In case of any difference between the two versions, the Nepali version will prevail.

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# Trail Bridge Strategy 2006

## 1. Background

Nepal has a long tradition of constructing trail bridges. For centuries, communities have been constructing trail bridges across rivers and gorges along foot trails. The government began constructing trail bridges at important locations along major trade routes at the beginning of the 20th century. The process of constructing trail bridges in a systematic and planned manner began only in 2021 BS (1964-65). In the beginning, attention was focused on constructing trail bridges on the main trails and over strategically important rivers and gorges. However, a high demand for trail bridges on local trails led to the development of alternative technologies and implementation approaches for constructing trail bridges on such trails as well.

By end Ashadh 2061 (July 15, 2004), more than 3,000 trail bridges have been constructed in Nepal. But due to the large number of rivers and streams, it is still necessary to build many more bridges. As such, due priority is accorded in the periodic plans for the construction of trail bridges.

The Local Self-Governance Act, 1999, and the Local Self-Governance Rules, 1999, provides for handing over responsibilities for planning, implementing, operating, repairing and maintaining local infrastructure development programs to the local bodies. In view of the extensive

nature of the local bodies' jurisdiction, resources provisions and the scope for mobilizing resources, they will be contributing significantly to the development of the country. The Local Infrastructure Development Policy, 2004 (2061 BS) devolves responsibilities for planning, implementing, operating, repairing and maintaining local infrastructure development programs, previously operated by the central agencies, to the local bodies with the objective of making them more active, people-oriented and accountable under the local self-governance system.

The central agencies of the government, local bodies, donor agencies, and other organizations and associations are actively engaged in the task of constructing trail bridges. This Trail Bridge Strategy, 2006 has been approved and brought into force to bring uniformity not only in technologies, standards, norms and specifications of bridges but also to ensure that all bridge builders follow a similar implementation approach.

## 2. Definitions

Unless otherwise meant with reference to the subject or context, the following terms used in the Trail Bridge Strategy, 2006 will have the following meaning:

- (a) Trail Bridge means a permanent physical structure built to cross a river, stream or ravine lying on a trail. The term includes steel cable bridge and steel truss bridge.
- (b) Central Agencies include the appropriate Ministries and Departments.

- (c) Local Bodies include Village Development Committees, Municipalities and District Development Committees formed under the Local Self-Governance Act, 1999.
- (d) Municipalities include Metropolitan Cities, Sub-Metropolitan Cities and Municipalities.
- (e) Local Trails means trails identified as local trails in the map of the concerned district by the Department of Local Infrastructure Development and Agricultural Roads.
- (f) Main Trails means trails identified as main trails in the map of the concerned district by the Department of Local Infrastructure Development and Agricultural Roads.
- (g) Service Provider includes private sector consultants, construction entrepreneurs, fabricators and non-governmental organizations.

### 3. Goal

Construction and operation of trail bridges will promote access for the local people (particularly, women, dalits, ethnic communities, the disadvantaged, discriminated and marginalized classes) to social and basic services, economic resources and opportunities, thereby contributing towards poverty alleviation.

### 4. Objective

The objective of this strategy is to facilitate peoples' movement by constructing and operating trail bridges

on the initiative and with the participation of the local people.

### 5. Strategy

- 5.1 To provide trail bridge facilities to the local people at convenient and feasible locations for their movement.
- 5.2 To devolve the trail bridge program to the local bodies.
- 5.3 To select and use the right technologies for trail bridge construction.
- 5.4 To adopt the right approaches for construction and maintenance of trail bridges.
- 5.5 To enhance institutional capacity and development of trail bridge technologies.

### 6. Working Policy

The following working policies will be adopted to implement the above-mentioned strategies:

- 6.1 **To provide trail bridge facilities to the local people at convenient and feasible locations for their movement**
  - 6.1.1 Trail bridge facilities will be made available at locations deemed convenient for the local people to cross rivers, streams and ravines along trails.
  - 6.1.2 Trail bridges will be constructed at locations that would avoid the need for local people to detour more than an hour to cross a river, stream or ravine.
  - 6.1.3 In order to meet the objective stated above under 6.1.2, a national level study report on additional need for

pedestrian bridges along the trails will be made within the tenth plan.

- 6.1.4 The tasks of planning, implementing, operating and maintaining trail bridge programs will be accomplished with the participation of the local people.

## **6.2 To Devolve the Trail Bridge Program to the Local Bodies**

- 6.2.1 Trail bridges will be included in the District Transport Master Plan.
- 6.2.2 Trail bridge programs and resources will be devolved from the central agencies to the local bodies.
- 6.2.3 On the basis of the grants to be made available by the center, as well as their own internal resources, the local bodies will plan, prepare and implement construction, operation and regular and major maintenance of trail bridges.
- 6.2.4 District Development Committees will allocate funds to the VDCs under their jurisdiction for the maintenance of trail bridges.
- 6.2.5 Local bodies will identify, select and prioritize trail bridge programs on the following basis by adopting the procedure prescribed by the Local Self-Governance Act and Rules.
- 6.2.5.1 Trail bridge programs will be prioritized according to the Social Organizational Support Manual mentioned in Schedule A (5) on the basis of the population benefiting from them, the number of women, Dalits and people belonging to ethnic communities benefiting from them, the distance gained, the types of rivers and the risks involved.

- 6.2.5.2 Trail bridge programs will be prioritized in the order of routine maintenance, major maintenance, and carry-over programs, respectively.

- 6.2.6 Formulation of plans, construction, operation and maintenance of bridges along the main trails will be the responsibility of the District Development Committees.

- 6.2.7 Formulation of plans, construction, operation and maintenance of bridges along the local trails will be the responsibility of the Village Development Committees / Municipalities.

- 6.2.8 Village Development Committees / Municipalities may request the District Development Committee for the construction of a trail bridge in case they lack adequate technical capacity. In such cases, the District Development Committee may construct trail bridges on local trails.

- 6.2.9 Ownership of trail bridges constructed on the local trails will be vested in the concerned VDC/Municipality.

- 6.2.10 Ownership of trail bridges constructed on the main trails will be vested in the District Development Committees.

- 6.2.11 Local bodies will allocate necessary budget for the routine maintenance of trail bridges and involve the communities in the task.

- 6.2.12 Every District Development Committee will keep a record of all trail bridges within the district and forward a copy thereof to the Department of Local Infrastructure Development and Agricultural Roads.

## **6.3 To Select and Use the Right Technologies for Construction of Trail Bridges**

- 6.3.1 Trail Bridges have been classified as follows:

- (a) Short Span Trail Bridge (SSTB): A Short Span

Trail Bridge means 32 to 120 meters span trail bridges constructed by using steel cables.

- (b) Long Span Trail Bridge (LSTB): A Long Span Trail Bridge means more than 120 meters span trail bridge constructed by using steel cables. Ordinarily, a suspended type long span trail bridge will have a length of not more than 350 meters, while a suspension type long span trail bridge will have a length of not more than 280 meters.
- (c) Steel Truss Bridge (ST): A steel truss bridge means one not more than 32 meter in length constructed by using steel truss.

- 6.3.2 The working procedure delineated in the Short Span Trail Bridge Technical Handbook mentioned in Schedule A (1) and (2) must be adopted while constructing a short span trail bridge.
- 6.3.3 The working procedure delineated in the Long Span Trail Bridge Manual mentioned in Schedule A (3) must be adopted while constructing a long span trail bridge.
- 6.3.4 The working procedure delineated in the Steel Truss Bridge Manual mentioned in Schedule A (4) must be adopted while constructing a steel truss bridge.
- 6.3.5 In case it becomes necessary to construct a trail bridge with a span exceeding the span mentioned in 6.3.1 (b), its design and cost estimates must be prepared and submitted to the Department of Local Infrastructure Development and Agricultural Roads for concurrence.
- 6.3.6 In case the estimated cost of a trail bridge exceeds Rs. 8 million, it will be constructed only if it is feasible following a socio-economic feasibility study conducted in the

manner delineated in the Manual for Consulting Services mentioned in Schedule A (6).

- 6.3.7 Ordinarily, no long span trail bridge will be constructed on a local trail. In case it becomes necessary to do so, a socio-economic feasibility study will be conducted as delineated in the Manual for Consulting Services mentioned in Schedule A (6). A long span trail bridge will be constructed on a local trail only if the report of the study finds it to be appropriate.
- 6.3.8 Environmental aspects will be considered while conducting surveys of trail bridges.

#### **6.4 To Adopt the Right Approaches for Construction and Maintenance of Trail Bridges**

- 6.4.1 The appropriate local body may execute construction and maintenance (routine and major) of short span trail bridges and steel truss bridges through User Committees.
- 6.4.2 Local bodies may execute the task of construction and major maintenance of long span trail bridges under 'contract' modality.
- 6.4.3 The task of constructing and carrying out major maintenance of long span trail bridges will be executed in coordination with the Cooperation Committee comprising representatives of the users. The local body will form such a committee.
- 6.4.4 Construction and maintenance procedures of short span trail bridges and steel truss bridges will be as delineated in the Social Organizational Support Manual mentioned in Schedule A (5).
- 6.4.5 Environment-friendly, labor-intensive and participatory working procedure will be adopted for the construction and maintenance of trail bridges.

- 6.4.6 Non-governmental organizations and the private sector may be involved in the construction / major maintenance of trail bridges for purposes of technical and social mobilization.
- 6.4.7 The local body that owns the trail bridge will be responsible for its routine, major and emergency maintenance.
- 6.4.8 In case any non-governmental organization provides the technical services (survey, design, cost estimates and supervision) needed for the construction/major maintenance of a short span trail bridge or a steel truss bridge, the service charge will amount to not more than three (3) percent of the total estimated cost of construction / major maintenance.
- 6.4.9 In case any non-governmental organization provides social mobilization and organizational assistance services for construction/major maintenance of a short span trail bridge or a steel truss bridge, the service charge will amount to not more than three (3) percent of the total estimated cost of construction/major maintenance.
- 6.4.10 Tasks like conducting surveys and preparing designs and cost estimates of a long span trail bridge may be executed through a technical consultant. The service fee for such tasks will be according to the approved norms.
- 6.4.11 Construction of a long span trail bridge may be supervised by a technical consultant. The service fee will be according to the approved norms.
- 6.4.12 Technical consultants will be selected in the manner delineated in the Manual for Consulting Services mentioned in Schedule A (6).
- 6.4.13 Construction/major maintenance of long span trail bridges

- will be contracted under the Construction Turnkey Package. For this, the Manual for Contractors mentioned in Schedule A (7) will be followed.
- 6.4.14 The Quality Control Manual mentioned in Schedule A (8) will be followed to ensure the quality standards of construction/maintenance work of trail bridges.
- 6.4.15 Before constructing trail bridges, all agencies, other than the central agencies and the local bodies must secure the approval of the concerned District Development Committee. They must also submit to the District Development Committee a copy of all documents/records of the project.
- 6.4.16 Selection procedure and functions of non-governmental organizations will be as mentioned in Schedule C.
- 6.4.17 Local bodies will keep record of all expenses of the trail bridge and have them audited according to prevailing laws and rules.
- 6.4.18 After completion of construction/major maintenance of a trail bridge, the concerned agencies may have them technically audited by a third party.
- 6.4.19 After completion of construction/major maintenance of a trail bridge, the local body/user committee must provide to the public full information about its estimated and actual costs, sources of finance, wage rates and statements of payment and quantities and procurement rates of construction materials.
- 6.4.20 Communities undertaking to build short span trail or steel truss bridges on local trails will themselves arrange for land needed for the construction. In the case of other trail bridges, the concerned District Development Committee will arrange for the necessary land.

## **6.5 To Enhance Institutional Capacity and Development of Trail Bridge Technologies**

- 6.5.1 Trail bridge related training will be provided for enhancing the capacity of technicians belonging to the central agencies and the local bodies.
- 6.5.2 Private sector consultants, construction entrepreneurs, fabricators and non-governmental organizations will also be provided opportunity to participate in trail bridge training.
- 6.5.3 Trail bridge training will be provided on the basis of A Training Course Manual On Trail Bridges for Practitioner Engineers mentioned in Schedule A (9), A Training Course Manual On Trail Bridges for Practitioner Diploma in Civil Engineering mentioned in Schedule A (10) and A Training Course Manual On Trail Bridges for Practitioner Sub-Overseers mentioned in Schedule A (11).
- 6.5.4 Trail bridge training programs may also be conducted through educational institutions according to need.
- 6.5.5 For skilled manpower, the subject of trail bridges will be incorporated in the curricula of educational institutions. Such educational institutions will prepare and conduct curricula on the basis of A Course Manual on Trail Bridges for Bachelor in Civil Engineering mentioned in Schedule A (12), A Course Manual on Trail Bridges for Diploma in Civil Engineering mentioned in Schedule A (13) and A Course Manual on Trail Bridges for Sub-Overseers mentioned in Schedule A (14).
- 6.5.6 Bridge craft-persons selected by user committees will be provided with bridge construction training on the basis of the Demonstration Model Bridge Training Manual mentioned in Schedule A (16).

- 6.5.7 Bridge Wardens engaged in routine maintenance of trail bridges will be provided with training on the basis of the Routine Maintenance Manual mentioned in Schedule A (15).
- 6.5.8 Local bodies will entrust technical responsibility only to the employees capacitated and trained in that subject.
- 6.5.9 In order to develop optimal, simplified and cost effective trail bridge technologies, research and development work will continue, particularly for construction of multi span bridges over large rivers.

## **7. Working Principles**

- 7.1 Women's representation in User Committees will be at least 30 percent.
- 7.2 Ethnic communities, Dalits, disadvantaged, discriminated and marginalized communities must be represented in User Committees.
- 7.3 The principle of equal pay for equal work will be adopted.
- 7.4 Arrangements shall be made to ensure that the poor and disadvantaged communities benefit from the program.
- 7.5 All operations relating to trail bridges will be carried out in a transparent manner.

## **8. Roles of Central Agencies and Local Bodies**

Responsibilities of each body/agency are mentioned in Table 1.

## **8.1 Roles of Central Agencies**

### **8.1.1 National Planning Commission**

- (a) To issue directives in relation to periodic and annual plans and ensure or make arrangements for ensuring uniformity.
- (b) To arrange for annual budgets according to the programs.
- (c) To conduct monitoring and evaluation operations.

### **8.1.2 Ministry of Finance**

- (a) To mobilize foreign assistance by ensuring uniformity and establishing coordination with the donor agencies.
- (b) To make available sector grants for trail bridges to the local bodies.

### **8.1.3 Ministry of Local Development**

- (a) To prepare, review and implement or make arrangements for implementing trail bridge strategy.
- (b) To ensure or make arrangements for ensuring coordination with the other central agencies.
- (c) To monitor and evaluate trail bridge projects, or make arrangements for doing so.
- (d) To ensure or make arrangements for ensuring coordination among the donor agencies.
- (e) To make available sector grants to the local bodies.

### **8.1.4 Department of Local Infrastructure Development and Agricultural Roads**

- (a) To prepare, review and implement, or make

arrangements for implementing trail bridge manuals/hand-books.

- (b) To prepare, review and arrange for the implementation of trail bridge norms, standards and specifications.
- (c) To monitor and evaluate trail bridge programs.
- (d) To ensure standard work quality of construction and maintenance of trail bridges.
- (e) To conduct research and develop technologies related to trail bridges or make arrangements for doing so.
- (f) To compile necessary information about fabricators and cable manufactures capable of undertaking fabrication and cable manufacturing operations and furnish such information to the local bodies.
- (g) To compile and publish procurement rates of the major components of trail bridges.
- (h) To conduct or make arrangements for conducting training programs to promote the technical and social organizational capacities of the local bodies.
- (i) To compile statistics and particulars of trail bridges, update the Nepal Trail Bridge Record and publish it.
- (j) To decide the ownership of a bridge linking two or more districts in case the concerned District Development Committees fail to come to a decision through mutual understanding. Ordinarily, the ownership of such a trail bridge will be vested in the District Development

- (k) Committee taking initiative for its construction.
- (k) To coordinate program implementation among different funding agencies involved in the trail bridge sector.
- (l) To develop and apply Technical Standards and Trail Bridge Code or make arrangement for doing so.

## 8.2 Roles of the Local Bodies

### 8.2.1 District Development Committee

- (a) To prepare design, carry out construction, operation and maintenance of trail bridges on main trails and local trails or make arrangement for doing so following the standards prescribed by and the scope permitted by the Department.
- (b) To allocate grants received from the center for trail bridges to the Village Development Committees.
- (c) To coordinate district-level trail bridge programs.
- (d) To prioritize programs in the order of routine maintenance, major maintenance and carry-over programs respectively.
- (e) To prepare designs and cost estimates of trail bridges and approve them or make arrangements for having them approved.
- (f) To procure construction materials or make arrangements for doing so.
- (g) To supply construction materials to User Committees.
- (h) To help the community for procuring and supplying construction materials.

- (i) To provide procurement rates of construction materials to the Department of Local Infrastructure Development and Agricultural Roads.
- (j) To make arrangements for the mobilization of people's participation.
- (k) To ensure the participation of non-governmental organizations and the private sector.
- (l) To prepare and update a District Trail Bridge Record at the district level and furnish information thereof to the Department of Local Infrastructure Development and Agricultural Roads.
- (m) To provide technical and financial assistance to User Committees.
- (n) To arrange for third party technical audits.
- (o) To carry out emergency maintenance of trail bridges or make arrangements for doing so.
- (p) To ensure or make arrangements for ensuring standard work quality of trail bridges.
- (q) To undertake rectification work if the quality of work on the bridge do not conform to prescribed norms and standards and to have the bridge dismantled if such rectification work are not or cannot be done.
- (r) To make public or make arrangements for making public information about estimated and actual costs, sources of finance, etc.
- (s) To conduct or make arrangements for conducting Demonstration Model Bridge Training and Routine Maintenance Training Programs.
- (t) To settle disputes between VDCs/Municipalities on the subject of ownership of trail bridges.

- (u) To prepare annual reports of trail bridges and submit them to the Department of Local Infrastructure Development and Agricultural Roads.
- (v) To grant approval according to rules if agencies other than the central agencies and the local bodies request for permission to construct trail bridges.
- (w) To get trail bridge construction/maintenance managed by the concerned section/wing.
- (x) To incorporate / update trail bridges in the District Transport Master Plan.

**8.2.2 Village Development Committee/Municipality**

- (a) To formulate, review and revise periodic and annual plans of trail bridges on the local trails.
- (b) To prioritize programs in the order of routine maintenance, major maintenance and carry-over programs, respectively.
- (c) To procure construction materials.
- (d) To supply construction materials to user committees.
- (e) To help the community in the tasks of procurement and supply of construction materials.
- (f) To submit procurement rates of construction materials to the District Development Committee.
- (g) To accord preference for community approach for execution of program in order to mobilize people's participation.

- (h) To ensure the participation of non-governmental organizations and the private sector.
- (i) To provide technical and financial assistance to user committees.
- (j) To arrange for third party technical audits.
- (k) To ensure the quality standard of trail bridges.
- (l) To undertake rectification work if the quality of work on the bridge do not conform to prescribed norms and standards and to have the bridge dismantled if such rectification work are not or cannot be done.
- (m) To make public or arrange for making public information about the actual and estimated costs, sources of finances etc.

**Table 1: Table of Responsibility**

Activity	National Planning Commission	Local Development Ministry	Local Infrastructure and Agricultural Roads Department	DDC/Sectoral Technical Section	VDC/Municipality
Plan formulation and policy	<ul style="list-style-type: none"> <li>To issue directives in relation to periodic and annual plans from the national perspectives, and ensure uniformity</li> <li>To arrange for annual budgets according to programs</li> <li>To monitor/ evaluate</li> </ul>	<ul style="list-style-type: none"> <li>To prepare and review strategy and implement it or make arrangement for implementation</li> <li>To coordinate with other central level agencies</li> <li>To provide sector grants to the local bodies; to arrange for monitoring/ evaluation</li> </ul>	<ul style="list-style-type: none"> <li>To have the strategy implemented.</li> <li>To prepare guidelines/ directives, and arrange for their implementation.</li> <li>To prepare and review norms, standards and specifications.</li> <li>To monitor/evaluate</li> <li>To coordinate trail bridge program at the central level</li> </ul>	<ul style="list-style-type: none"> <li>To formulate, review and revise periodic and annual plans.</li> <li>To allocate trail bridge grants to VDCs/ municipalities.</li> <li>To give priority to maintenance and carry-over projects.</li> </ul>	<ul style="list-style-type: none"> <li>To formulate, review, and revise periodic and annual plans.</li> <li>To give priority to maintenance and carry-over projects.</li> </ul>
Design and Cost Estimates		<ul style="list-style-type: none"> <li>To examine and approve designs of trail bridges longer than the prescribed span.</li> </ul>	<ul style="list-style-type: none"> <li>To examine and approve designs of trail bridges longer than the prescribed span.</li> </ul>	<ul style="list-style-type: none"> <li>To prepare, approve and revise designs and cost estimates.</li> </ul>	<ul style="list-style-type: none"> <li>To prepare, approve and revise designs and cost estimates.</li> </ul>
Procurement and Supply		<ul style="list-style-type: none"> <li>To compile and publish procurement rates of construction materials</li> </ul>	<ul style="list-style-type: none"> <li>To submit the procurement rates of construction materials to the Local Infrastructure Development and Agricultural Roads Department.</li> <li>To procure construction materials and make them available to user committees</li> <li>To help the community in the procurement and supply of construction materials</li> </ul>	<ul style="list-style-type: none"> <li>To submit the procurement rates of construction materials to the DDC.</li> <li>To procure construction materials and make them available to user committees.</li> <li>To help the community in the procurement and supply of construction materials.</li> </ul>	<ul style="list-style-type: none"> <li>To submit the procurement rates of construction materials to the DDC.</li> <li>To procure construction materials and make them available to user committees.</li> <li>To help the community in the procurement and supply of construction materials.</li> </ul>

Contd....

**Table 1: Table of Responsibility**

Activity	National Planning Commission	Local Development Ministry	Local Infrastructure and Agricultural Roads Department	DDC/Sectoral Technical Section	VDC/Municipality
Construction/ Maintenance	<ul style="list-style-type: none"> <li>To mobilize foreign assistance</li> </ul>	<ul style="list-style-type: none"> <li>To carry out technical research and development as required</li> <li>To monitor and evaluate as needed</li> </ul>	<ul style="list-style-type: none"> <li>To compile necessary information about fabricators and cable manufacturers capable of undertaking fabrication and cable manufacturing operations and furnish such information to the local bodies.</li> <li>To ensure the quality standard of construction and maintenance work.</li> <li>To monitor and evaluate</li> <li>To conduct research and develop technology or make arrangements for doing so.</li> <li>To prepare Trail Bridge Code</li> </ul>	<ul style="list-style-type: none"> <li>To ensure the participation of NGOs and the private sector.</li> <li>To prepare District Trail Bridge Record and furnish a copy thereof to the Local Infrastructure Development and Rural Roads Department</li> <li>To have emergency maintenance undertaken at trail bridges.</li> <li>To implement plans through user committees/ contractors</li> <li>To have third party technical audits conducted.</li> <li>To undertake rectification work if the quality of work on the bridge do not conform to prescribed norms and standards and to have the bridge dismantled if such rectification work are not or cannot be done.</li> </ul>	<ul style="list-style-type: none"> <li>To mobilize people's participation.</li> <li>To ensure the participation of NGOs and the private sector.</li> <li>To have plans implemented through user committees/ contractor</li> <li>To arrange for third party technical audits.</li> <li>To undertake rectification work if the quality of work on the bridge do not conform to prescribed norms and standards and to have the bridge dismantled if such rectification work are not or cannot be done.</li> </ul>
Organizational management	<ul style="list-style-type: none"> <li>To ensure uniformity and coordination among donor agencies</li> <li>To give preference in budget allocation to districts following this strategy</li> </ul>	<ul style="list-style-type: none"> <li>To conduct or make arrangements for conducting Capacity Building Training</li> <li>To update and publish the Nepal Trail Bridge Record.</li> <li>To settle disputes concerning ownership of trail bridges connecting two or more districts and on technical matters.</li> </ul>	<ul style="list-style-type: none"> <li>To publish statements of actual and estimated costs, sources of finance, etc.</li> <li>To prepare annual reports of trail bridges and forward them to the Local Infrastructure Development and Rural Roads Department.</li> <li>To settle disputes between VDCs concerning ownership of trail bridges.</li> <li>To conduct demonstration model trail bridge training and routine maintenance training.</li> </ul>	<ul style="list-style-type: none"> <li>To make public statements of actual and estimated costs, sources of finance, etc.</li> <li>To mobilize local resources.</li> </ul>	<ul style="list-style-type: none"> <li>To make public statements of actual and estimated costs, sources of finance, etc.</li> <li>To mobilize local resources.</li> </ul>

## 9. Implementation

This strategy will come into force from the day His Majesty's Government so decides.

## 10. Review

This strategy will be reviewed when deemed necessary in order to make it effective and suitable to the times.

## Schedule A

### List of Technical Manuals and Hand Books

1. Short Span Trail Bridge Standard  
Technical Handbook for Suspended Type  
Volume - I, II and III (2003)
2. Short Span Trail Bridge Standard  
Technical Handbook for Suspension Type  
Volume - I, II and III. (2003)
3. Long Span Trail Bridge Manual  
Volume A : Design (2004)  
Volume B : Survey (1983)  
Volume C : Standard Drawings (2004)  
Volume D : Construction (1990)
4. Steel Truss Bridge Manual (2005)
5. Social Organizational Support Manual (2005)
6. Manual for Consulting Services (2004)
7. Manual for Contractors (2005)
8. Quality Control Manual (2005)
9. A Training Course Manual on Trail Bridges for  
Practitioner Engineers (2003)

10. A Training Course Manual on Trail Bridges for Practitioner Overseers (2003)
11. A Training Course Manual on Trail Bridges for Practitioner Sub-Overseers (2003)
12. A Course Manual on Trail Bridges for Bachelor of Civil Engineering (2003)
13. A Course Manual on Trail Bridges for Diploma in Civil Engineering (2003)
14. A Course Manual on Trail Bridges for Sub-Overseers (2003)
15. Routine Maintenance Manual (1999)
16. Demonstration Model Bridge Training Manual (2004)

Note: Ten Manuals and/or Handbooks mentioned in no. 1-8 and no. 15 & 16 of Schedule A are published with the approval of the Department of Local Infrastructure Development and Agricultural Roads whereas six manuals mentioned in no. 9-14 of Schedule A are published by Tribhuvan University, Institute of Engineering, Pulchowk. The year of publication is mentioned in brackets.

**Schedule B**

**District Development Committee**

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**Annual Report  
Relating to Trail Bridges**

**FY .....**

**Schedule B/1**

- 1. Background : Brief particulars of the District Transport Master Plan, the periodic plans, the donor agencies' programs and assistance relating to trail bridges, etc.
  
- 2. Target and Progress : Brief particulars of the targets and progress of construction, maintenance and mobilization of means and resources according to the programs of the FY (Development and sector grants of the DDC, VDC, User Committees, donor agencies, and others). (To Complete Schedule B/2 Form).
  
- 3. Location Map of the Bridge : District map showing the location of each bridge in the district.
  
- 4. Particulars of the Condition of the Bridge : Brief particulars of the condition/ status of each bridge in the district. (Schedule B/3)
  
- 5. District Bridge Register : Updated particulars of all trail bridges in the district and brief discussions about them. (Schedule B/4)

- 6. Bridge Craft Persons : Brief particulars of the number of trained bridge craft persons in the district, whether or not they are engaged in bridge-related work, the number of years of experience they have, their contact address, etc. (Schedule B/5)
  
- 7. Capacity Enhancement : Brief particulars of the number of persons who have received bridge training, the level of such training, the subjects and duration of such training; particulars of training to be provided in the future, if necessary.
  
- 8. INGO/NGOs : If INGOs/NGOs are involved in the construction/major maintenance of bridges, particulars thereof.

<u>Technical Chief</u>	<u>LDO</u>	<u>DDC Chairperson</u>
Signature: .....	Signature: .....	Signature: .....
Name: .....	Name: .....	Name: .....
Date:.....	Date:.....	Date:.....
Office Seal: .....	Office Seal:.....	Office Seal:.....

**Schedule B/2**

**Progress Report  
District Development Committee  
Annual Report (FY .....**

**A. New Construction**

S.N	Bridge		Span (m)	Walkway width (cm)	Status Completed/ Under construction	Grant Rs.			Total Expenditure (Rs.)	Per meter Cost (Rs.)	Construction Period (month)	Completion of work (Date)
	Number	Name				DDC	User Committee	VDC				

**B. Major Maintenance**

S.N	Bridge		Span (m)	Walkway width (cm)	Status Completed/ Under construction	Grant Rs.			Total Expenditure (Rs.)	Per meter Cost (Rs.)	Construction Period (month)	Completion of work (Date)
	Number	Name				DDC	User Committee	VDC				

(x) To specify "others" .....

**Schedule B/3**

**Particulars of Condition of Bridges  
District Development Committee  
Annual Report (FY .....**

S.N.	Bridge		Name of River	Span (m)	Walkway Steel/Timber	Walkway width (cm)	Year of Completion	Date of Last Inspection	Inspector's Name	Condition of Bridge	Remarks
	Number	Name									

**Schedule B/4**

**District Trail Bridge Record  
District Development Committee**

**Annual Report (FY .....)**

Date: ..... (Date of preparation of this report)

S. N.	Bridge		Name of River	Span (m)	Walkway Steel/ Timber	Coordinates		VDC		Year of Completion	Local/ Main/Trail	Period of Construction (month)	Constructing Agency
	Number	Name				Longitude	Latitude	Left Bank	Right Bank				

**Schedule B/5**

**List of Trained Bridge Craft Persons  
District Development Committee**

**Annual Report (FY .....)**

S. N.	Name of Trained Bridge Craft Person	Year of Training	Engaged/Not Engaged in Bridge Construction Work	Year of Experience	Address

## Schedule C

### Selection Procedure and Functions of NGOs

#### A. Selection

1. The local bodies will select NGOs.
2. The local bodies will issue public notices inviting proposals of interest from NGOs/ Community Organizations
3. The local bodies will form a Selection Committee to select NGOs.
4. NGO Selection Criteria
  - Registered with the District Administration Office : Yes/No
  - Acquired membership of the Social Welfare Council : Yes/No
  - Local/district based organization : Yes/No
  - Constitutional provision for open membership : Yes/No
  - Elected Executive Committee : Yes/No
  - Experienced in bridge construction : Yes/No
  - Satisfactory experience of working with communities : Yes/No
  - Respect in the eyes of the local people : Yes/No
  - Satisfactory commitment to mobilize local resources : Yes/No
  - Geographical coverage : Whole/part of the district

5. NGOs must submit the following documents along with their proposals:
  - A copy of registration/renewal certificate.
  - A copy of the document relating to the membership of the Social Welfare Council.
  - A copy of the constitution of the organization.
  - A copy of the institutional profile of the organization.
  - Copies of the activities reports of the last three years.
  - Copies of audit reports of the last three years.
  - Copies of curricula vitae of volunteers and/or employees.
  - Copies of certificates of performances/ experiences.
6. The Selection Committee will examine the proposals on the basis of the above-mentioned criteria.
7. The Selection Committee may hold discussions with NGO representatives, or inspect their offices and development activities.
8. The Selection Committee will submit the name of the selected NGO to the concerned local body for approval.
9. The concerned local body will grant

permission to hand over the responsibility of the concerned work to the NGO.

10. A Collaboration Agreement will be signed between the local body and the selected NGO. The form of the agreement is given in the Manual mentioned in Schedule A(5).

**B. Functions**

The following will be the main functions of the NGO:

- To promote the initiatives of the community and motivate it for active participation.
- To provide intensive and effective social mobilization/coordination support.
- To assist in the task of mobilizing local resources.
- To provide support to the local body to formulate and prioritize trail bridge programs.
- To monitor demands for bridges.
- To provide technical and social support to the community.
- To establish contacts and coordination with all related parties.
- To help the community in clearing obstacles faced in the course of constructing trail bridges.
- To prepare reports and submit them to the local body and the related parties.
- To help in ensuring the smooth operation of routine repair and maintenance work.