

Bangladesh: Operation for Supporting Rural Bridges (SupRB)

Terms of Reference for: Technical Agent (Consulting Firm) for Result Measurement and Disbursement Linked Indicator Verification

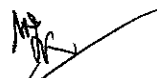
1.0 Context

1. The Government of the People's Republic of Bangladesh and the International Development Association (the World Bank) entered into an agreement on December 06, 2018 for a US\$ 425 million credit to support the Local Government Engineering Department (LGED)'s 'Rural Bridge Program' along Upazila Road (UZR) and Union Road (UNR) (hereafter refer to as 'Operation for Supporting Rural Bridges (SupRB)'). The objective of the Operation is to improve and preserve rural bridges to support connectivity and climate resiliency, and strengthen institutional management. The Operation consists of Part1: 'The Program' and Part2: 'The Project'. The Operation has been designed to use the World Bank's two lending instruments: Program for Results (PforR) for Part1, and Investment Project Financing (IPF) for Part2. The credit amount US\$ 393 million will use the World Bank's new Program for Results (PforR) lending instrument which ties disbursements to results achieved. Key results envisaged from the Program include (a) physical works related indicators: completing approximately (i) 60,000 meters of minor bridge maintenance; (ii) 25,000 meters of major bridge maintenance; (iii) 24,000 meters of rehabilitation of bridges; (iv) 5,000 meters of capacity expansion of existing bridges; and (v) 10,000 meters of replacement and 10,000 meters of new bridge construction; and (b) achieving measurable progress against several institutional development process indicators including: (i) Rural bridge information management system (RuBIMS), (ii) Contract and fiduciary system management performance, and (iii) Transparency and accountability. The Project Part2 under the Operation will use IPF lending instrument for supporting program implementation and strengthening, and a number of program institutional capacity building activities. This terms of reference (ToR) is prepared for "indicator" activities verification which are linked to disbursements.

The 'Project Director' An Additional Chief Engineer, LGED headquarter will lead the Program implementation in close coordination with the LGED's different units at headquarters as well as field level offices. Over a five-year period (September 2018 to August 2023), the Program will be implemented in 61 districts (except 3 hill districts: Rangamati, Khagrachari and Bandarban). The 61 district-level executive engineer offices will lead the Program delivery. The executive engineer offices will be responsible for the procurement, contract and quality management, contractor's payment settlement, monitoring and reporting. These offices will be supported by 466 upazila engineer offices through contract supervision, quality control, and monitoring and reporting. Other field-level offices (additional chief engineer offices and superintending engineer offices) will provide necessary Program implementation oversight. Several other units/sections of LGED (for example, procurement unit, audit unit, quality control unit) will play key supporting roles the Program implementation, monitoring, capacity development, and quality assurance.

The Program disbursements will depend on the achievement of results as measured by a framework of Disbursement Linked Indicators (DLIs). Descriptions of DLIs is provided in ANNEX-1 to this ToR. The Implementation, Monitoring and Evaluation Division (IMED) under the Ministry of Planning, Government of Bangladesh (hereinafter called the '*verification entity*') is responsible for leading verification process of DLIs under the Program. The IMED is intending to appoint a consulting firm over the country for verification of DLIs, reporting and feedback. The role of the consulting firm (hereinafter called the '*technical agent*'), will be to conduct verification process on behalf of the IMED for carrying out following key tasks:

- (i) Checking completeness of data provided in each Dossier of the specific DLIs;
- (ii) Examining the accuracy of data as per verification protocols described under each DLI and adjust the reported results accordingly; and
- (iii) Providing a convenient summary of actual results achieved that the Bank may use to disburse funds.



2. Objective of the Services

The main objective of the technical agent (Consulting Firm) services is to support IMED in examining completeness of data, results verification of specific DLIs as per verification protocols and preparing reports on actual results achieved and providing constructive feedbacks to the IMED.

3. Scope of the Services

3.1 Task Descriptions

The achievement of results gets confirmed through two steps according to verification protocols of the Program. Firstly, by checking their completeness/compliance of the gross data against the requirements given in Dossier/Report for particular DLI. Secondly, by conducting field verification of the results achieved through an agreed method of verification between LGED and Association. The first step is generally known as Desk Review, where sampling will be 100%. The second step is generally called as field verification, where sampling will be as per mandated in the verification protocols and adjust the reported results accordingly. The final step is preparing reports on actual results achieved and providing constructive feedbacks to the IMED. The scope of works under the terms of reference will be, but not limited to, the followings:

3.1.1 General

- (i) During inception, review and familiar with the Program Operation Manual (POM) and all related documents of the program;
- (ii) Develop understanding (if required, may take general briefings, clarification on the Program in detail from IMED and LGED) roles and responsibilities of each concerned stakeholders on the Program including roles and responsibilities of the firm as an appointed technical agent to conduct verification process in the project area under the program;
- (iii) Familiar with relevant documents of the Program such as, Government's approved DPP, Program Appraisal Document (PAD), Financing Agreement (FA), etc;
- (iv) Develop clear understanding on the assessing list of completed bridges under different types of intervention and to check completeness of data provided in Dossiers (ANNEX-2); examining accuracy of data, and methodology for conducting specific DLI verification protocol achievements; and results reporting and feedback as described and appended to this ToR (ANNEX-3).

3.1.2 Gross Results Measurement

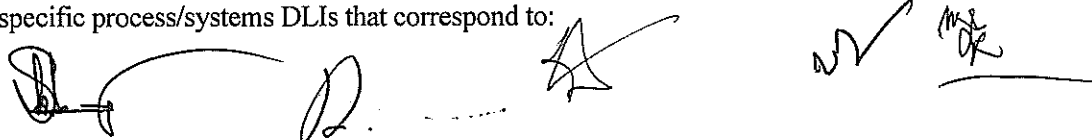
Assessing completeness of data (Desk Review)

For verification of physical DLIs#1 to 5

- (i) Upon receipt the list of completed bridges under designated districts and upazila-wise from IMED, review for gross results verification (*list would be prepared in a simple database format by LGED and submitted to IMED*);
- (ii) LGED will provide the specific bridge 'Dossier' folder through online/ hard copy to IMED for checking the completeness of contents (ANNEX-2);
- (iii) Review data requirements against data provided in 'Dossier' as per specific DLI verification protocol achievements. Coordinate with Project Director, LGED to address any data gaps;
- (iv) Prepare an eligible list (100% sampling) of completed bridges (*for verification of physical DLIs #1 to 5 intervention types*) through screening of requirements, exceptions and exclusions as defined and stipulated against specific DLI verification protocol achievements table appended to this ToR;
- (v) Carryout sampling (% as mandated against specific DLI verification protocols) on random basis (*from list of eligible completed bridges*) and choose/select eligible bridges candidate for physical/field verification as per *specific* DLI verification methodology table appended to this ToR (Annex-3);

For verification of process DLIs#6,7&8

Upon receipt of dossiers/data/reports from IMED (*as appropriately provided by LGED*) review and examine completeness of requirements as stipulated in verification protocol achievements of specific process/systems DLIs that correspond to:



DLI#6: Rural bridge information management system (RuBIMS)—review, examine and conduct an audit of a portion of entries (in web base platform of RuBIMS) to check the completeness and correctness of the entered data;

DLI#7: Contract and fiduciary system management performance as stated below -

DLI#7a: Percentage of bridge works contracts under the Program included in the electronic contract management (e-CM) system module: review and examine using a desk-based verification process taking data from the e-GP (e-CM) system;

DLI#7b: Percentage of bridge works contracts under the Program completed within the original time: review and examine using a desk-based verification process taking data from the e-GP (e-CMS) system;

DLI#7c: Effective and efficient fiduciary management (Audit committee formation and resolution of audit observations under the Program): review and examine using a desk-based verification process;

DLI#8: Transparency and accountability verification protocol achievements as stated below -

DLI#8a: Adaptation and operationalization of Grievance Redressal System (GRS): review and examine using a desk-based verification process;

DLI#8b: Development and operationalization of smartphone-based field inspection application: review and examine using a desk-based verification process;

3.1.3 Results Verification

Examining accuracy of data

For verification of physical DLIs #1 to 5

- (i) Conduct field visit for randomly tracking sample of completed bridge works from planning, execution and contract inception to substantial completion in order to check the accuracy of data as provided in the Dossier, and as per requirements of verification protocol achievements for specific DLI (ANNEX-3).

For verification of process DLIs #6,7&8

- (i) As the most of the data/information/report/developed system relates to process DLIs #6,7&8 would be maintained and available in LGED headquarters, for verification of results as per verification protocol achievements (ANNEX-3), the technical agent would coordinate with the Project Director, LGED and agree suitable time-frame to conduct verification process in LGED headquarters. Except for DLI#6 RuBIMS—the technical agent may also conduct field visits to physically sample check the correctness of the entries.

3.1.4 Results Reporting and Feedback

Results reporting will form the basis for loan disbursements from IDA to the Government of Bangladesh. In addition, DLI reports should provide useful insights for the cause of any superior or lagging performance related to DLI targets. The scope of results reports will include, but not limited to, the followings:

- (a) Brief summary of verification activities undertaken to check the accuracy of gross results data (desk study);
- (b) Convenient summary of verified results for all DLIs along with recommended disbursement levels for each DLI (field verification);
- (c) Summary of major discrepancies (if any) between gross and verified results including a short explanation for such discrepancies;
- (d) Recommendations for possible areas of improvements, and corrections on the verified results for each DLI; and
- (e) Recommendations and constructive critical analysis for any specific DLI underachieving or overachieving the given targets.



4. Deliverables

The deliverables under this assignment will comprise of inception report, Intermittent Result Reports, Annual Result Reports and Completion report. Details of deliverables are summarized below but not limited to the followings:

4.1 Inception Report

The technical agent (Consulting Firm) is expected to elaborate the methodology for completing each of the tasks in their inception report. Among others, the inception report should contain detailed at least:

- Proposed template for results completeness assessment and results verification;
- Proposed template for reporting and providing constructive feedback to concerned authorities;
- Detailed methodology for accomplishing each task discussed above including estimates for resources - man power, logistic and equipment required for completing the tasks described;
- Proposed timeline required for completing each task/event including submission of reports to IMED for proposed volume of works;
- Within two weeks of mobilization the technical agent (Consulting Firm) will share the draft inception report with IMED and also present the inception report to IMED, LGED, and WB for their review and comments/recommendations. Final inception report is to be submitted incorporating all comments/recommendations within seven days after receive comments of IMED and other Program stakeholders but not later than twenty-one days from submission of the Draft Inception report.

4.2 Results Reports

The technical agent (Consulting Firm) will provide services under this assignment when Dossiers of reasonable volume are submitted by LGED to IMED for results verification. Under this assignment, 10 (ten) tasks will be given to the Consulting Firm during the project period. LGED mandates to receive one of these services comprising cumulative information of the whole fiscal year and further update during July, August, and September each year between 2018 and 2023, which will be called Annual Result Reports, whereas other reports shall be called Intermittent Result Reports to be submitted within the completion of each task. The Annual Result Reports/Intermittent Result Reports should be strictly followed the template as provided in ANNEX-4.

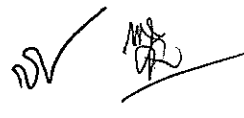
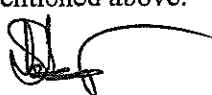
10 (ten) tasks as mentioned above during the project period will be as follows:

Fiscal Year	No. of Task/Event for DLI verification	Remark
2018-19	-	Yearly distribution of Tasks may be varied as per submission of proposal from LGED to IMED
2019-20	1	
2020-21	3	
2021-22	3	
2022-23	3	
Total	10	

Depending on 10 (ten) tasks/events, the technical agent (Consulting Firm) is required to submit 04 (four) Annual Result Reports depending of the availability of task(s), 10 (ten) Intermittent Result Reports and 01 (one) Completion report during the project period.

The technical agent may also be required to attend Program briefings or other meetings throughout the year in order to stay up-to-date on implementation progress or unforeseen challenges. Additional services may be required and negotiated on and as per need basis.

The technical agent's (Consulting Firm) output from this assignment will involve the following reports as mentioned above:



- Draft Intermittent Result Report comprising preliminary findings from gross results measurements and results verification, which is to be finalized while incorporating all the comments of LGED and other Program stakeholders regarding the accuracy or completeness of the reports within two weeks of submission of the draft report;
- Draft Annual Results Reports comprising cumulative summary of previous reports and any update on preliminary findings from gross results measurements and results verification will be submitted on end-August of each year. No later than seven days the Draft Annual Results Reports to be finalized incorporating all comments of LGED and other Program stakeholders regarding the accuracy or completeness of the reports by end-September annually;
- All due dates for reports will be adjusted to the next working day if the agreed dates fall on a non-working day (Government of Bangladesh's official holiday schedule);
- However, reporting of results verification is to be programed in such a way that it could be flexible subject to submission of Dossiers of the completed works under the Program by LGED for results verification purposes.

4.3 Timelines for Deliverables

The technical agent (Consulting Firm) shall prepare and submit 5 (five) copies for each of the following reports to IMED:

Deliverables	Timelines
▪ Draft Inception Report	▪ Within two weeks of mobilization
▪ Final Inception Report	▪ within seven days after receive comments of LGED and other Program stakeholders but not later than twenty one days from submission of the Draft Inception report.
▪ Intermittent Results Reports	▪ Within four weeks after agreed starting date in each task
▪ Final or Annual Results Report	▪ Four weeks after submission of draft annual results report

4.4 Completion Report

The technical agent (Consulting Firm) is required to submit completion report with 5 (five) copies in addition to compiling summary reports of all tasks after completion of the assignment.

5. Time schedule for the assignment and duration of the Contract

It is expected that verification technical agent (Consulting Firm) services will commence around April 2020, and has been planned to be completed in June 2023. The assignment may be extended if the duration of the program extends.

6. Contract, payment arrangements and annual work plans

The technical agent's (Consulting Firm) contract and payment arrangements will be with IMED. All activities will reflect close coordination with the LGED and the World Bank. The payment to the Consulting firm from IMED will be based on the submission and Client's approval of deliverables. The Indicative Payment Structure will be as follows:

No.	Benchmark	Times of Incidence	Payment of Contract amount in each Task	Total Payment of Contract amount
1.	Mobilization Advance upon signing the Contract	01	-	5%
2.	Submission and acceptance of Inception report	01	-	5%
3.	Submission of Deliverable - Intermittent Results Reports	10	9%	90%
4.	Submission of Completion Report	01	-	5%



7. Technical Agent Team

The technical agent (consulting firm) will comprise of 01 (one) team leader, 04 (four) civil engineers/contract specialists, 04 (four) safeguard specialists and 04 (four) data analysts. All the team members along with the team leader are national input and their services are intermittent in nature. They will be deputed as and when required by the program. The indicative total inputs are summarized in the table below:

Technical Agent's Team and Indicative Inputs during project period

SL.#	TEAM MEMBER POSITION (NO.)	EXPERIENCE	INPUTS PER PERSON (PERSON DAYS)	TOTAL INPUTS (PERSON DAYS)
1	Team Leader / Planning and Budget Specialist (1)	Senior	320	320
2	Civil Engineer / Contract Specialist (4)	Mid-level	320	1280
3	Safeguard Specialist (4)	Mid-level	320	1280
4	Data Analyst (4)	Mid-level	320	1280
Indicative Total Inputs during project period:			1280	4160

Qualifications and experience of core team member

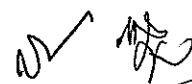
The required qualification and experience of the core team member in the team are detailed as follows. However, it is anticipated that the intending verification technical agent should propose detailed job description, duties and responsibilities against each position in their methodology in order to accomplish the tasks described in the scope of services:

Position: Team Leader/Planning and Budget Specialist (1)-S/he should have minimum graduate degree in civil engineering. Master degree or doctorate degree in engineering or business administration will be an added advantage. Minimum 20 years work experience of which at least 12 years involved in the road infrastructure (at least 2 different assignments).Should have project management skills demonstrated by holding Team Leader position, leadership qualities, good communication skills (fluent in English), and experienced in report preparation skills.The Team Leader will have overall responsibility for the verification technical agent's services, be familiar with all aspects of the tasks listed above and will closely coordinate with the IMED and other Program stakeholders to conduct the DLIs verification process.

Position: Civil Engineer/ Contract Specialist (4)-S/he should have minimum graduate degree in civil engineering. Master degree in civil engineering will be an added advantage. Minimum 12 years work experience of which at least 7 years involved in the structural engineering or transportation engineering or construction supervision of infrastructure works or contract management or quality control. Experience in road and bridge works, procurement and supply chain, knowledge of engineering standards practiced in Bangladesh will be a plus.

Position: Safeguard Specialist (4) - S/he should have minimum graduate degree in environmental engineering or environmental science or civil engineering. Master degree in environmental engineering or environmental science or civil engineering will be an added advantage. Minimum 10 years work experience of which at least 5 years involved in the compliance monitoring of social and environmental consideration including occupational health and safety (OHS) and labour welfare compliance in civil works comprising roads and bridges. She/he should have working experience in contract documents preparation related to social and environmental considerations. Experience in working with infrastructure development project will be a plus.

Position: Data Analyst (4) - S/he should have minimum graduate degree in science or any technical discipline. Minimum 7 years professional work experience of which at least 3 years involved in the data analysis, sampling and processing.



8. Facilities provided by Client

Available data will be provided by the client. The technical agent (Consulting Firm) may engage support staff if required. Client will provide office space, furniture & office equipment, Computer & other accessories and vehicle facilities (including driver & fuel) through reimbursable expenses. All non-consumable items will be returned to the client at the end of the assignment.

9. Institutional Arrangement

The Director General (DG) of IMED will coordinate the consultant. The Consultant will submit all reports to IMED. The nominated person of DG will work closely with the consultant.

10. Roles, Responsibilities and Reporting

Activity	LGED	IMED	Tech. Agent	World Bank
Overall professional responsibility including technical and financial considerations to complete of the Bridge works eligible for the Program	√	×	×	×
Initiating DLI verification process	√	×	×	×
Lead DLI verification process	×	√	×	×
Conduct DLI verification following desk review, field verification as per verification protocols of the Program and preparation of draft report of results achieved and constructive feedback	×	×	√	×
Final report preparation comprising achieved results and constructive feedback	×	√	×	×
Results achieved notification and initiating disbursement request	√	×	×	×
Disbursement as per DLR achieved	×	×	×	√

Reporting

- Verification technical agent shall report to IMED;
- IMED recommends and send result reports to LGED with a copy to WB;
- LGED submits disbursement request to WB;



Description of Disbursement Linked Indicators (DLIs) under SupRB

The disbursement under a program using Program-for-Result (PforR), a new financing instrument of the World Bank, is made against predetermined Disbursement Linked Indicators (DLIs). DLIs can be outputs, outcomes, intermediate outcomes, or process indicators that are key actions needed to address specific risks or constraints to achieving development objectives. The SupRB Program has eight (8) DLIs. The five DLIs (DLI-1 to 5) are fully scalable. Therefore, disbursements will be made based on the extent of the targets they achieve. The DLI targets are specified as the cumulative number of meters completed for either maintenance or new construction activities. A bridge will only be counted toward the target if the physical works are fully completed (as per requirements stipulated in each DLI verification protocol achievements table). The remaining three DLIs (DLI-6 to DLI-8) are process DLIs. Two of these DLIs, DLI-6 on implementation of RuBIMS and DLI-8 on transparency and accountability, are 'all-or-nothing' targets, which is considered both essential and achievable. DLI-7 on improvement of contract and financial management systems is scalable, barring an item of the same DLI that deals with the financial management, which is an 'all-or-nothing' target.

The Program will disburse against the achievement of DLI targets anytime within the Program period. This means, if the Program fails to achieve a DLI target in any year, the related disbursement amount will be rolled over to the next year. If the Program consistently overachieves its targets, the credit/loans could be fully disbursed before the formal end of the operation.

DLI # 1: Rural Bridge Minor Maintenance

The Program will support the *minor* maintenances of approximately 2,000 existing bridges (about 60,000 meters) on UZR and UNRs that are in relatively stable condition and having **no structural deficiency**. Minor maintenance focuses on the maintenance of non-structural elements of existing bridges following Bridge Maintenance **Catalogue-A** of LGED to enhance the serviceability, service life and adaptation to any climate change. Bridge works included in this DLI category will be selected following the Program operational strategy flowchart and will be prioritized considering the structural deficiencies of bridges, connectivity, and socio-economic activities. This DLI is fully scalable. No baseline or minimum target has been set for this DLI.

DLI # 2: Rural Bridge Major Maintenance

The Program will support *major* maintenances of approximately 1,000 existing bridges (about 25,000 meters) on UZR and UNRs that have **minor/major structural deficiencies** of the structural elements of bridges which signify a progression of the deterioration process. These elements may need condition based preventive maintenance following Bridge Maintenance **Catalogue-B** of LGED to extend the service life and improve the climate resiliency of rural bridges. Bridge works included in this DLI category will be selected following the Program operational strategy flowchart and will be prioritized considering the structural deficiencies of bridges, connectivity, and socio-economic activities. This DLI is fully scalable. No baseline or minimum target has been set for this DLI.

DLI # 3: Rural Bridge Rehabilitation

The Program will support *rehabilitation* works of approximately 950 existing bridges (about 24,000 meters) on UZR and UNRs that have **advanced stage of deterioration** which may need preventive maintenance of other interventions following Bridge Maintenance **Catalogue-C** of LGED to restore these bridges to a condition to improve their service life substantially and climate resilient adaptability of the bridges. Bridge works included in this DLI category will be selected following the Program operational strategy flowchart and will be prioritized considering the structural deficiencies of bridges, connectivity, and socio-economic activities adaptability. This DLI is fully scalable. No baseline or minimum target has been set for this DLI.

DLI # 4: Rural Bridge Capacity Expansion

The Program will support **capacity expansion** of approximately 150 bridges (about 5,000 meters) on UZR and UNRs that will need to expand the bridge deck width **due to the increase in traffic and safety demands** on existing routes. The capacity expansion of the existing bridges will be done following Bridge Maintenance **Catalogue-D** of LGED including the climate resilient features. Capacity expansion of bridges will enhance the rural network more operational. Bridge works included in this

DLI category will be selected following the Program operational strategy flowchart and will be prioritized considering the structural deficiencies of bridges, connectivity, and socio-economic activities. This DLI is fully scalable. No baseline or minimum target has been set for this DLI.

DLI # 5: Rural Bridge Replacement or New Construction

The Program will support replacement of existing bridges or new construction on existing gaps on UZR and UNRs. **Bridges which are no more functional or which have deteriorated to such an extent that they can no longer serve their intended purposes will be replaced with new bridges.** Approximately 875 bridges (about 10,000 meters of Replacement and about 10,000 meters of New Construction) will be construction with updated design and specification and resilience to climate change. Bridge works included in this DLI category will be selected following the Program operational strategy flowchart and will be prioritized considering the structural deficiencies of bridges, connectivity, and socio-economic activities. This DLI is fully scalable. No baseline or minimum target has been set for this DLI.

DLI # 6: Rural Bridge Information and Management System (RuBIMS)

The activity under this DLI involves operationalization of RuBIMS with data and updating of data. RuBIMS is designed to be a comprehensive system for collection and maintenance of rural bridge data and for aiding informed rural bridge decision making. It has a smartphone cum tablet-based interface that facilitates collection of bridge data. Once it is fully developed, populated with bridge data, and synchronized with the GIS, RuBIMS will be able to provide information on: (a) spatial location and physical characteristics of rural bridges (for example, location, total length, bridge type); (b) construction and maintenance history details (for example, date constructed/maintained, intervention type); (c) data collection history (for example, date of collection dates); (d) required type of maintenance intervention; and (e) a prioritized list of bridges with recommended interventions. This DLI is non-scalable. The milestones set for achievement are as follows-

- *Second year:* Collecting 20% UNRs and UZR bridges and gap data across the country, populating RuBIMS using the collected data and publishing the bridge data on the LGED website.
- *Third year:* Collecting additional 40% UZR and UNRs bridges and gap data, populating RuBIMS using the collected data and publishing the bridge data on the LGED website.
- *Fourth year:* Collecting additional 40% UZR and UNR bridge and gap data, populating RuBIMS using the collected data and publishing the bridge data on the LGED website.
- *Fifth year:* Collecting updated UZR and UNR bridge and gap data in at least 50% of districts, updating RuBIMS information using the updated data, and publishing the updated data on the LGED website.

No baseline or minimum target has been set for this DLI.

DLI # 7: Contract and Fiduciary System Management

The contributions of this DLI are business process improvement, accountability improvement and contract efficiency improvement. The financing allocated to this DLI is about 2.54% of total financing amount. This DLI has three parts:

DLI#7a: Percentage of national competitive tenders' using e-Contract Management module of the Electronic Government Procurement (e-GP). This portion is scalable. No baseline or minimum target has been set for this DLI.

DLI#7b: Percentage of works contracts under the Program completed within the original contractual timeline. This portion is scalable as well. No baseline or minimum target has been set for this DLI.

DLI#7c: Effective and efficient fiduciary system management. This portion is non-scalable. The baseline is no committee for audit observation resolution, *ad-hoc* internal audit arrangements and resolution of material audit observations poor. Milestones set for achievement are as follows-



- *Milestone 1:* Constitution of an Audit Observation Resolution Committee at the LGD which will meet at least twice within a financial year with an aim to resolve audit issues (expected to be achieved within the 2nd year of the program)
- *Milestone 2:* Successful completion of at least one internal audit assignment of the Program using risk-based by the LGED's own internal audit department (expected to be achieved within the 3rd year of the program)
- *Milestone 3:* Resolution of at least 80% (in number) of audit observations (expected to be achieved within the 4th year of the program)

DLI # 8: Transparency and Accountability

The contributions of this DLI are transparency and accountability improvement and business process improvement. The financing allocated to this DLI is about 2.54% of total financing amount. This DLI is *non-scalable*. It has two parts:

DLI#8a: Adaptation and operationalization of Grievance Redressal System (GRS). For this part the baseline is that there is no workable GRS available. Indicative timeline for achievement is as follows-

- *Milestone 1 :* The LGED adapts and approves GRS Guidelines in line with the Cabinet Division's GRS guidelines of 2015.
- *Milestone 2:* The LGED implements a department-wide web-based GRS to track complaints on department activities. The department publicly publishes summary yearly reports detailing the number of complaints received, complaint types, and status of their resolution.
- *Milestone 3:* The LGED publicly publishes summary yearly reports detailing the number of complaints received, complaint types, and status of their resolution.
- *Milestone 4 :* The LGED publicly publishes summary yearly reports detailing the number of complaints received, complaint types, and status of their resolution.
- *Milestone 5:* The LGED publicly publishes summary yearly reports detailing the number of complaints received, complaint types, and status of their resolution.

DLI#8b: Development and operationalization of smartphone-based field inspection application. For this part the baseline is the beta version of the smartphone-based application for field work inspection available. Indicative timeline for achievement is as follows-

- *Milestone 1 :* The LGED finalizes the design and approves a tablet- cum smartphone-based application for field work inspection.
- *Milestone 2:* The LGED publishes a summary yearly report on the number of site visits made, summary findings from these visits, and number of visits made by different level of officials.
- *Milestone 3:* The LGED publishes a summary yearly report on the number of site visits made, summary findings from these visits, and number of visits made by different level of officials.
- *Milestone 4 :* The LGED publishes a summary yearly report on the number of site visits made, summary findings from these visits, and number of visits made by different level of officials.
- *Milestone 5 :* The LGED publishes a summary yearly report on the number of site visits made, summary findings from these visits, and number of visits made by different level of officials.



Content of a Dossier (applicable for physical DLIs #1 to 5; to be prepared for each individual bridge)

DOSSIER no.: _____

Program Intervention Type: _____ [Minor maint/Major maint/Rehab/..etc.]; **FY:** _____

District: _____; **Upazila:** _____;

Sl#	Content	Source of Document
A. Bridge Details		
1	Name of Bridge/River/Canal	Inventory reports from RSDMS/ RuBIMS
2	Bridge Identification no.	
3	Road Link (UZR or UNR)	
4	Road Identification no.	
5	Road Name (as per Gazette Oct 29, 2017)	
6	Bridge Location Chainage on road link	
7	Bridge Type	
8	Bridge Length (m)	
9	Carriageway width (m)	
10	Total Bridge width (m)	
11	Bridge location shown in Upazila Road Map	Map generated from GIS/ RuBIMS
B. Planning and Approval		
1	Bridge identified as for _____ (e.g., <i>major maintenance</i>) in the prioritized Annual Work Plan (AWP) generated from RuBIMS/ Prioritization based on the criteria set forth in POM	Bridge 'Annual Maintenance Plan' approved by the SE, _____ Region, LGED. Prioritization based on the Criteria set forth in POM. [SE's approval copy kept in Dossier]
2	Bridge included in Annual Work Plan based on the Budget Cycle (Financial Year)	Administrative approval letter of Bridge works based on the FY. [As per delegation of financial authority, scheme approval copy kept in Dossier]
3	Implementation of AWP included in line with a Time Bound Procurement Plan	Annual Procurement Plan (APP) of the Bridge works [APP kept in Dossier]
4	Environmental and Social Impacts Screening Report/ Impact Assessment Report/ Management Plan following LGED's ESMF	Concerned Estimate and Tender Document [Kept in Dossier] [Not applicable for minor maintenance]
C. Contract Execution		
1	Tendering Method	Scanned copy of Agreement [APP kept in Dossier] and e-GP report
2	Contract Price	
3	Contract Agreement date	
4	Contract Completion date	
5	Time Control: Work Program (WP)/Revised WP	Work Program/Revised WP [kept in Dossier]
6	Program intervention type Catalogue _____ [A,...] followed for contract execution	Write Catalogue _____ (as appropriate A, B, C etc.) followed for contract execution

Sl#	Content	Source of Document
5	Quality Assurance Plan (QAP) and Test Certificates [<i>as the case may be</i>]	: Scanned copy approved summary sheet of Lab test reports [kept in Dossier]
6	Contract Completion Certificate	: Contract completion certificate [kept in Dossier]
7	Bridge Photographs (Before work start)	: Attached photograph from Estimates/FIMS/ RuBIMS [kept in Dossier]
8	Bridge Photographs (After work completion)	: Attached photograph from Completion Report/ FIMS/ RuBIMS [<i>kept in Dossier</i>]

Content of Dossier (for process DLI# 6)

DOSSIER no.: _____

FY: _____

Protocol Requirements		Source of information
Number of UNR and UZR bridge and gap data (all districts) in RuBIMS	:	<i>Inventory report from RuBIMS</i>
Number of updated UNR and UZR bridge and gap data (all districts) in RuBIMS	:	<i>Inventory report from RuBIMS</i>
Data published on LGED website	:	<i>LGED website</i>
Number of UNR and UZR bridge and gap data (all districts) from structure inventory	:	<i>LGED website</i>



Content of Dossier (for process DLI# 7a)

DOSSIER no.: _____

FY: _____

Protocol Requirements		Source of information
Number of national competitive tenders issued under the SupRB program within the FY	:	<i>e-GP report</i>
Number of national competitive tenders issued using e-CM	:	

Checklist for Content of Dossier (for process DLI# 7b)

DOSSIER no.: _____

FY: _____

Protocol Requirements		Source of information
Number of work contracts made under SupRB	:	<i>e-GP report</i>
Number of contracts completed within the original contractual timeline	:	

Checklist for Content of Dossier (for process DLI# 7c)

DOSSIER no.: _____

FY: _____

Protocol Requirements		Source of information
Formation of Audit Observation Resolution Committee (AORC)	:	<i>Notification Issued from LGD</i>
Meetings arranged by the committee within the FY	:	<i>Meeting minutes</i>
Number of internal audit assignment completed by LGED's internal audit	:	<i>Documentary Evidence from LGED</i>
Audit observations made	:	<i>Number of Audit Observation made in FY by C&AG Audit Team</i>
Audit observations resolved	:	<i>Number of Audit observation resolved by AORC</i>











Content of Dossier (for process DLI# 8a)

DOSSIER no.: _____

FY:

Protocol Requirements	Source of information
Adaptation and approval of GRS Guidelines in line with the Cabinet Division's GRS guidelines of 2015 by LGED	: <i>Guideline prepared by LGED and Approved by CE, LGED</i>
Implementation of department-wise web-based GRS	: <i>LGED website</i>
Publicly published yearly summary report	:

Content of Dossier (for process DLI# 8b)

DOSSIER no.: _____

FY:

Protocol Requirements	Source of information
Finalization and approval of FIMS	: <i>Documentary Evidence from LGED</i>
Publicly published yearly report	: <i>FIMS generated report/LGED website</i>



DLI VERIFICATION METHODOLOGY

DLI # 1: Rural Bridge Minor Maintenance- Verification Methodology

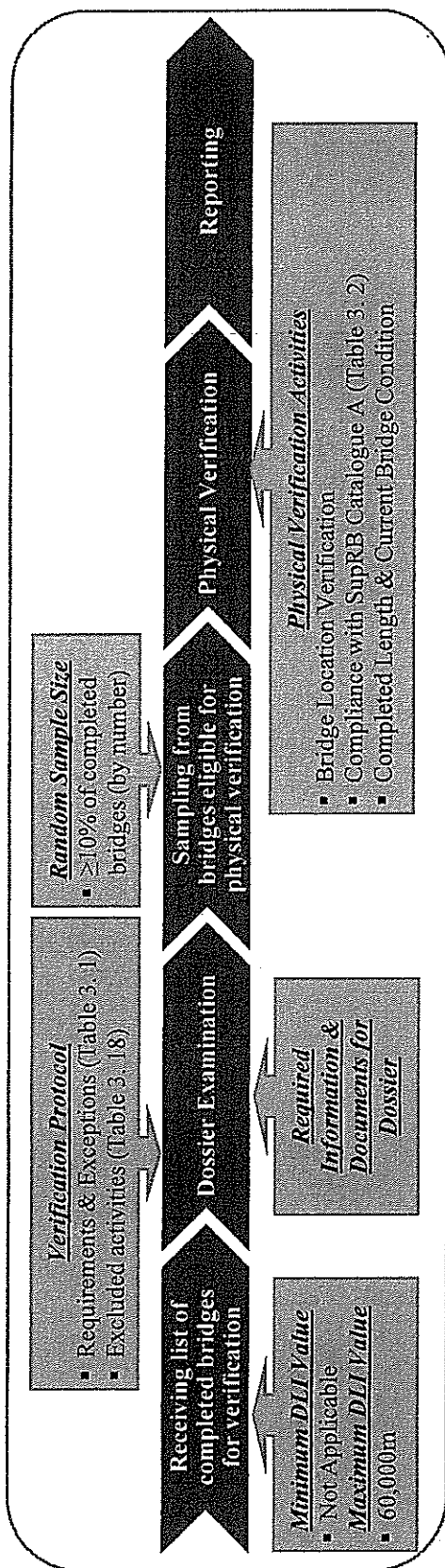


Table 3. 1: DLI # 1 Verification Protocol Achievements

Requirements	Exceptions
i. Completion of one or more minor maintenance works as defined in Table 3. 19 and physical verification of repair works for all elements listed in Catalogue-A (Table 3. 2)	▪ Unless site conditions demand partial solutions as the only practicable option. ▪ None
ii. Located either on a UZR or a UNR according to updated list in the GoB's gazette notification dated October 29, 2017	▪ Before the finalization of RuBIMS the prioritization should be based on the criteria set forth in Table 3. 20. ▪ The first-year program has been agreed based on 2017/18 condition surveys but prioritized manually following Table 3. 21 as RuBIMS was still under development. This will be an acceptable basis for determining agreed bridges. ▪ None
iii. The bridge is identified for minor maintenance in the prioritized annual work plan generated through the RuBIMS.	▪ None
iv. The bridge appears in the annual work plan which is the basis for funding through the budget cycle.	▪ None
v. Implementation of the work plan in line with a time bound procurement plan.	▪ None
vi. Only completed bridges will be counted toward the DLI.	▪ None

Table 3. 2: Catalogue - A: Minor Maintenance

Catalogue - A: Minor Maintenance					
All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)					
Activities	Segments/ Component/ Elements	Element Condition State (CS)	Structure Condition		Description of Items
			Super Structure	Sub Structure	
Cleaning, Removal and Disposal	Carriageways, footpaths, verges, expansion joints, ducts, drainage spouts, bridges	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Clearing and grubbing by removal and disposal of all kinds of unwanted vegetation, bushes, debris, and so on. From carriageways, footpaths, verges, deck slabs, and so on. - Clean out stones, debris, and vegetation from expansion joints, remove debris, dirt, vegetation, damage to bearing such as tearing, deterioration, flattening, other abnormal deformation, loose bearings and mortars, and so on from bearing or bearing plinth/base. - Remove graffiti, vegetation, silt, and debris, including animal and fecal deposits from sub and super structures, clean out weep holes, and drainage pipes. - Clean surfaces of all signs, remove all notices and advertisements from signs, and so on. - Remove tree trunks and branches, especially around and between piers and abutments and clean out accumulation of debris and vegetation within 150 meters upstream or downstream of the structure. - Clear the drainage culverts, desilt waterways, drains and drainage structures, and restore the original water course.
Earth work	Approaches	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Refill settled/eroded embankments close to abutments, slopes of approaches, shoulders with suitable material, and so on. - Refill earth masses below and around foundations with suitable material, and so on. - Minor bed protection to minimize scour required to keep the foundations unexposed. - Approach slope protection to prevent breaching of approach road.
Protective works	Approaches	Fair (CS2)	Good (CS1)	Good (CS1)	- Minor repair/replacement of cement concrete (CC) blocks, toe walls of approaches. - Construct/repair/reconstruct protective works of approaches and so on.







Catalogue - A: Minor Maintenance

All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)					
Activities	Segments/ Component/ Elements	Element Condition State (CS)	Structure Condition		Description of Items
			Super Structure	Sub Structure	
Resealing and overlays	Approaches	Fair (CS2)/ Poor (CS3)	Good (CS1)	Good (CS1)	- Repair potholes, edge breaks, depressions, ruts, cracks, raveling/delamination, including approach settlement, remove unsound material and place hot mix asphalt for temporary repair, and so on. - Seal cracks providing chips sealing or any other suitable treatment options and so on. - Reseal/overlays of approaches (if necessary) and so on.
Repairing/ Replacement	Wearing course	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Repair holes, ruts, cracks, unevenness, corrugation, shoving, and so on. - Repair/replace wearing course - Repair/replace of checker plates of steel deck of Bailey bridges, and so on.
	Expansion joint, drain pipes and outlets, abutment/ wing walls	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Rake out and replace damaged or missing gap sealant of expansion joints. - Repair/replace damaged or worn-out drainages systems, extend/replace drainage pipes, and so on. - Re-pointing of loose mortar or re-facing of spalled screed of abutment/wing wall, and so on. - Replace missing bolts and tighten loose bolts, re-weld top cover plates where broken or loose, replace gaskets, and so on.
Repairing/ Replacement / Painting	Rail bar, rail post, wheel guard	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Repair/replace damaged reinforced cement concrete/steel railing, wheel guard, footpaths, and so on. - Paint reflectorized painting/coating on rail post, rail bar, wheel guard, and so on.
Painting	Steel members of truss and Bailey bridges	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	Paint steel members of truss and Bailey bridges (if necessary)
Road safety activities	Railing, rail posts, wheel guard, deck slab, and approaches	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)	Good (CS1)	- Repair/replace/construct all damaged signs, reinforced cement concrete guide posts, and so on. - Repaint all signs (reflectorized painting/coating) and so on.

Note: a. Replace - Only part of the component/element of the structure can be replaced.







DLI # 2: Rural Bridge Major Maintenance - Verification Methodology

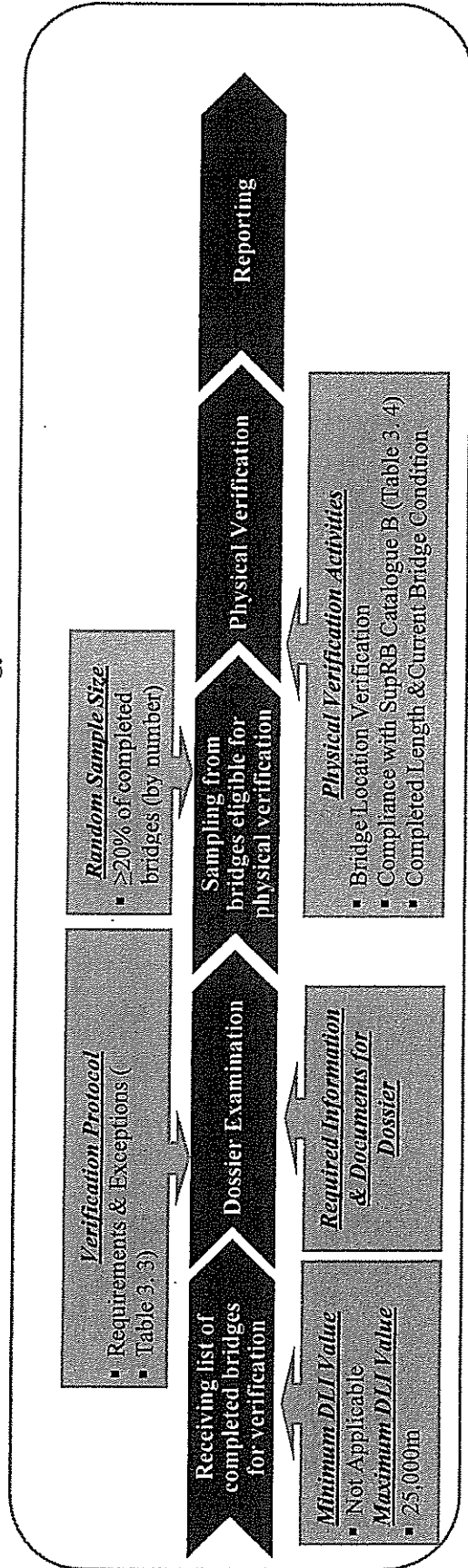


Table 3.3: DLI 2 Verification Protocol Achievements

Requirements		Exceptions
i. Completion of one or more major maintenance works as defined in Table 3. 19 and physical verification of good repair for all elements listed in Catalogue-B of Table 3. 4		▪ Unless site conditions demand partial solutions as the only practicable option.
ii. Located either on a UZR or a UNR according to the GoB's gazette notification dated October 29, 2017 or any subsequent notification(s) in this regard.		▪ None
iii. The bridge is identified for major maintenance in the prioritized annual work plan generated through the RuBIMS.		▪ Before the finalization of RuBIMS the prioritization should be based on the criteria set forth in 3.20. ▪ The first-year program has been agreed based on 2017/18 condition surveys but prioritized manually following 3.21 as RuBIMS was still under development. This will be an acceptable basis for determining agreed bridges.
iv. The bridge appears in the annual work plan which is the basis for funding through the budget cycle.		▪ None
v. Implementation of the work plan in line with a time bound procurement plan.		▪ None
vi. Environmental and Social risks assessed and risk mitigation measures implemented as per ESMF (Environmental and Social Management Framework) provisions.		▪ None
vii. Implemented using the approved 'Quality Assurance Plan' and evidence exists in this regard.		▪ None
viii. Only completed bridges will be counted toward the DLI.		▪ None

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Table 3. 4: Catalogue - B: Major Maintenance

Catalogue - B: Major Maintenance (Including Minor Maintenance)						
All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)						
Activities	Segments/ Component/ Elements	Element Condition State (CS)	Structure Condition		Description of Items	
			Super Structure	Sub- Structure		
Repairing/ Retrofitting	Pile, pile cap, pier cap, and abutment wall	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Fair (CS2)	Repair/retrofit/replace^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of abutments, supports, pile, pile cap, pier cap/super structures, and so on.	
Repairing/ Replacement	Bearing assembly	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Fair (CS2)	Repair/replace elastomeric bearing pads, repair minor damaged to concrete bearing seats, loose bolts, and so on.	
Repairing/ Retrofitting/ Replacement	Wing wall	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Fair (CS2)	Repair/retrofit/replace^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of wing walls, and so on.	
	Girder and cross-girder	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Fair (CS2)	Good (CS1)/ Fair (CS2)	Repair/retrofit/replace^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of girder and cross girder, and so on.	
	Steel members of truss and Bailey bridges	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Fair (CS2)	Good (CS1)/ Fair (CS2)	Repair/retrofit/replace^a damaged or differential settled, defective due to corrosion of steel members/decks or truss of bailey bridges, and so on.	
	Deck and walkway	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Fair (CS2)	Good (CS1)/ Fair (CS2)	Repair/retrofit/replace^a damaged or deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of deck and walkway and so on.	
Repairing/ Rehabilitation	Embankment slope protection	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Good (CS1)/ Fair (CS2)	Construct/repair/reconstruct approach embankment and protective works (if necessary) of approaches and so on.	
	Bridge approaches	Severe (CS4)	Good (CS1)/ Fair (CS2)	Good (CS1)/ Fair (CS2)	Reconstruct/rehabilitation of settled/eroded approaches and so on.	






Catalogue - B: Major Maintenance (Including Minor Maintenance)

All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)					
Activities	Segments/ Component/ Elements	Element Condition State (CS)	Structure Condition		Description of Items
			Super Structure	Sub- Structure	
Repairing/ Reconstructio n/ New construction	River training works	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Good (CS1)/ Fair (CS2)	▪ Repair/reconstruct river bank/slope protection works, construct suitable protective works of exposed piles due to erosion/scour and so on. ▪ Remove accumulated excessive inorganic/combustible materials within 150 meters upstream or downstream of the structure. ▪ Refill, with suitable materials, eroded subsoil close to the abutments or near the abutments or supports and so on.

Note: a. Replace - Only part of the component/element of the structure can be replaced.






DLI # 3: Rural Bridge Rehabilitation - Verification Methodology

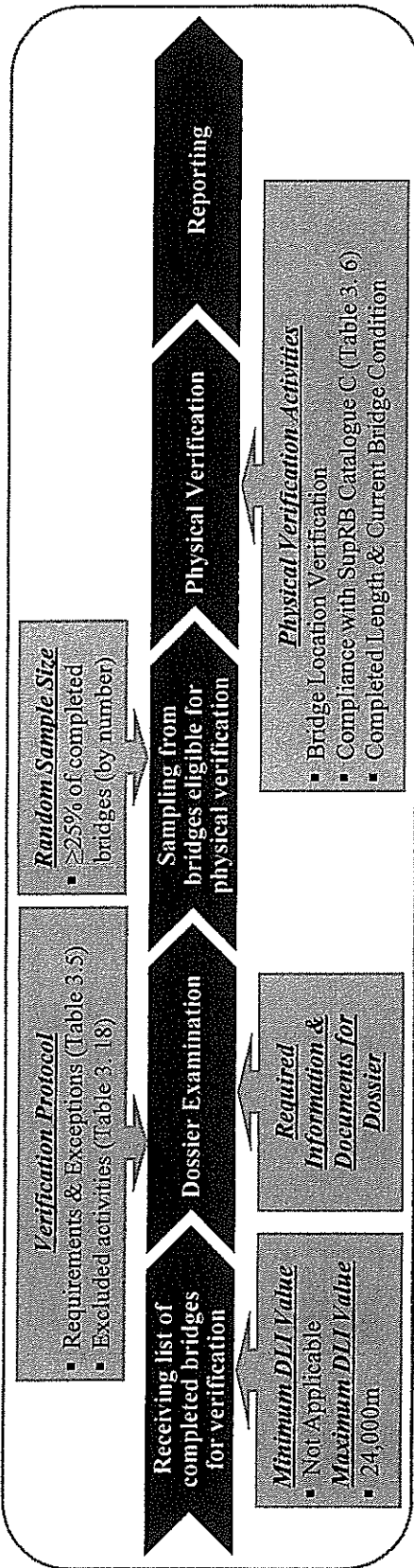


Table 3.5: DLI 3 Verification Protocol Achievements

Requirements		Exceptions
i. Completion of one or more rehabilitation works as defined in Table 3.19 and physical verification of state of good repair for all elements listed in Catalogue-C of Table 3.6		- Unless site conditions demand partial solutions as the only practicable option. - A flexibility of 20 percent will be given to cover bridges that do not follow this process to allow for unforeseen or emergency situations. Any modular bridges procured and stored in strategic locations to restore connectivity disrupted by natural extreme events (for example, floods) will be included within this limit. - Maximum 10 percent of the DLI value as defined in Table 3.19 will be eligible for structures over 3 meters and up to 6 meters length (applicable for 1st year program). - None
ii. Located either on a UZR or a UNR according to the GoB's gazette notification dated October 29, 2017 or any subsequent notification(s) in this regard.		
iii. The bridge is identified for rehabilitation works in the prioritized annual work plan generated through the RuBIMS.		- Before the finalization of RuBIMS the prioritization should be based on the criteria set forth in Table 3.20. - The first-year program has been agreed based on 2017/18 condition surveys but prioritized manually following Table 3.21 as RuBIMS was still under development. This will be an acceptable basis for determining agreed bridges. - None
iv. The bridge appears in the annual work plan which is the basis for funding through the budget cycle.		
v. Implementation of the work plan in line with a time bound procurement plan.		

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vi. Environmental and Social risks assessed and risk mitigation measures implemented as per ESMF (Environmental and Social Management Framework) provisions.	▪ None
vii. Implemented using the approved 'Quality Assurance Plan' and evidence exists in this regard.	▪ None
viii. Only completed bridge length and procured and strategically stored modular bridge length will be counted toward this DLL.	▪ None

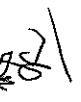
Table 3. 6: Catalogue - C: Rehabilitation

Catalogue - C: Rehabilitation (Including Minor and Major Maintenances)					
All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)					
Activities	Segments/ Component/ Elements	Element Condition State (CS)	Structure Condition		Description of Items
			Super Structure	Sub-Structure	
Repair/ Retrofitting	Cap, Pier, pier cap, and abutment wall (for carriage width ≥ 5.5 m)	Poor (CS3)	Good (CS1)/ Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)/	▪ Retrofit/replace ^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of abutments, supports, pile, pile cap, pier cap/super structures, and so on.
Repairing/ Retrofitting/ Replacement	Girder and cross-girder (for carriage width ≥ 5.5 m)	Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace ^a damaged or serious settlement, deformed or visible reinforcement bars or spalling due to corrosion of reinforcement of girder and cross girder and so on.
Repairing/ Retrofitting/ Replacement	Deck and walkway (for carriage width ≥ 5.5 m)	Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace ^a damaged or deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of deck and walkway and so on.
Repair/ Retrofitting	Cap, Pier, pier cap, and abutment wall for carriage width between > 3 m and < 5.5 m (If structural review suggests no capacity expansion)	Poor (CS3)	Good (CS1)/ Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)/	▪ Retrofit/replace ^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of abutments, supports, pile, pile cap, pier cap/super structures, and so on.
Repairing/ Retrofitting/ Replacement	Girder and cross-girder for carriage width between > 3 m and < 5.5 m (If structural review	Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace ^a damaged or serious settlement, deformed or visible reinforcement bars or spalling due to corrosion of reinforcement of girder and cross girder and so on.

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	suggests no capacity expansion)					
Catalogue - C: Rehabilitation (Including Minor and Major Maintenances)						
All Type of Bridges (Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges)						
Repairing/ Retrofitting/ Replacement	Deck and walkway for carriage width between > 3m and < 5.5 m (If structural review suggests no capacity expansion)	Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace^a damaged or deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of deck and walkway and so on.	
Repair/ Retrofitting	Cap, pier, pier cap, and abutment wall (for carriage width < 3 m)	Good (CS1)/ Fair (CS2)/ Poor (CS3)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace^a damaged or serious settlement, deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of abutments, supports, pile, pier cap, pier cap/super structures, and so on.	
Repairing/ Retrofitting/ Replacement	Girder and cross-girder (for carriage width < 3 m)	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace^a damaged or serious settlement, deformed or visible reinforcement bars or spalling due to corrosion of reinforcement of girder and cross girder and so on.	
Repairing/ Retrofitting/ Replacement	Deck and walkway (for carriage width < 3 m)	Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	▪ Retrofit/replace^a damaged or deformed or visible reinforcement bars or spalling concrete due to corrosion of reinforcement of deck and walkway and so on.	
Major Scope		Activities			Description of Items	
Modular bridge		Procurement and stacking of modular bridges or its parts at all the LGED regional offices.			▪ To support any emergency situation for maintaining road connectivity such as ➢ Sudden collapse of any bridges or culverts; ➢ One or more elements of the bridge heavily and critically damaged that compromises the safety of the traffic using the bridge; and ➢ Bridge collapse due natural disaster and so on.	

Note: Replace - Only part of the component/element of the structure can be replaced

DLI # 4: Rural Bridge Capacity Expansion - Verification Methodology

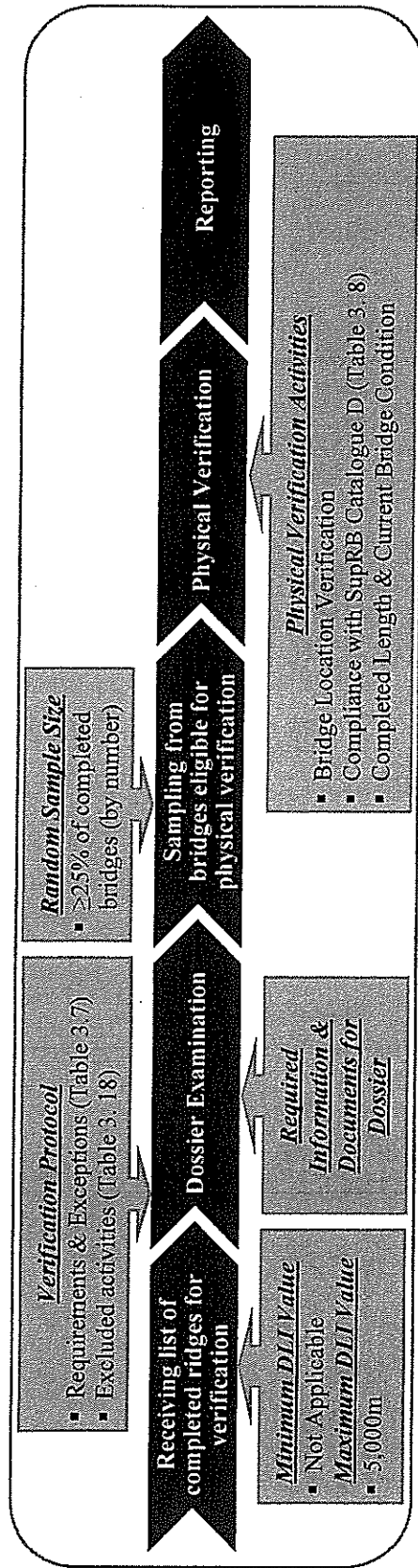


Table 3. 7: DLI 4 Verification Protocol Achievements

Requirements	Exceptions
i. Completion of one or more capacity expansion works as defined in Table 3. 19 and physical verification of state of good repair for all elements listed in Catalogue-D of Table 3. 8	- Unless site conditions demand partial solutions as the only practicable option. - Maximum 10 percent of the DLI value as defined in Table 3. 19 will be eligible for structures over 3 meters and up to 6 meters length (applicable for 1st year program).
ii. The bridge is identified for capacity expansion works in the prioritized annual work plan generated through the RuBIMS.	- Before the finalization of RuBIMS the prioritization should be based on the criteria set forth in Table 3. 20. - The first-year program has been agreed based on 2017/18 condition surveys but prioritized manually following Table 3. 21 as RuBIMS was still under development. This will be an acceptable basis for determining agreed bridges.
iii. The bridge appears in the annual work plan which is the basis for funding through the budget cycle.	None
iv. Implementation of the work plan in line with a time bound procurement plan.	None
v. Environmental and Social risks assessed and risk mitigation measures implemented as per ESMF (Environmental and Social Management Framework) provisions.	None
vi. Implemented using the approved 'Quality Assurance Plan' and evidence exists in this regard.	None
vii. Achievement will be attained based on the cumulative number of meters of completed bridges made available in the country.	None

DLI # 4: Rural Bridge Capacity Expansion - Verification Methodology

DLI # 4: Rural Bridge Capacity Expansion - Verification Methodology

DLI # 4: Rural Bridge Capacity Expansion - Verification Methodology

Table 3. 8: Catalogue - D: Capacity Expansion

Catalogue - D: Capacity Expansion			
All Type of Bridges (length < 100m) [Except Arch Masonry Bridges, Lightweight Bridges, Iron Bridges, and Wooden Bridges]			
Activities	Existing Structure Condition		Description of Items
	Super Structure	Sub-Structure	
Capacity expansion of existing structure (if carriage width < 5.5 meters and structural review suggests capacity expansion)	Good (CS1)/ Fair (CS2)	Good (CS1)/ Fair (CS2)	- Attaining minimum minor maintenance of existing structure (if required) to comply with Catalogue-A - Attaining minimum major maintenance of existing structure (if required) to comply with Catalogue-B - Capacity expansion of both super and sub structure of existing structure or capacity expansion of only super structure
Capacity expansion of existing structure (if carriage width < 5.5 meters and structural review suggests capacity expansion) by including additional new bridge construction parallel to existing structure	Good (CS1)/ Fair (CS2)	Good (CS1)/ Fair (CS2)	- Attaining minimum minor maintenance of existing structure (if required) to comply with Catalogue-A - Attaining minimum major maintenance of existing structure (if required) to comply with Catalogue-B - Attaining minimum rehabilitation works of existing structure (if required) to comply with Catalogue-C - New construction of bridge (Carriage width ≤ 3.6 m) without any significant and irreversible social and environmental consequences.







DLI # 5: Rural Bridge Replacement or New Construction - Verification Methodology

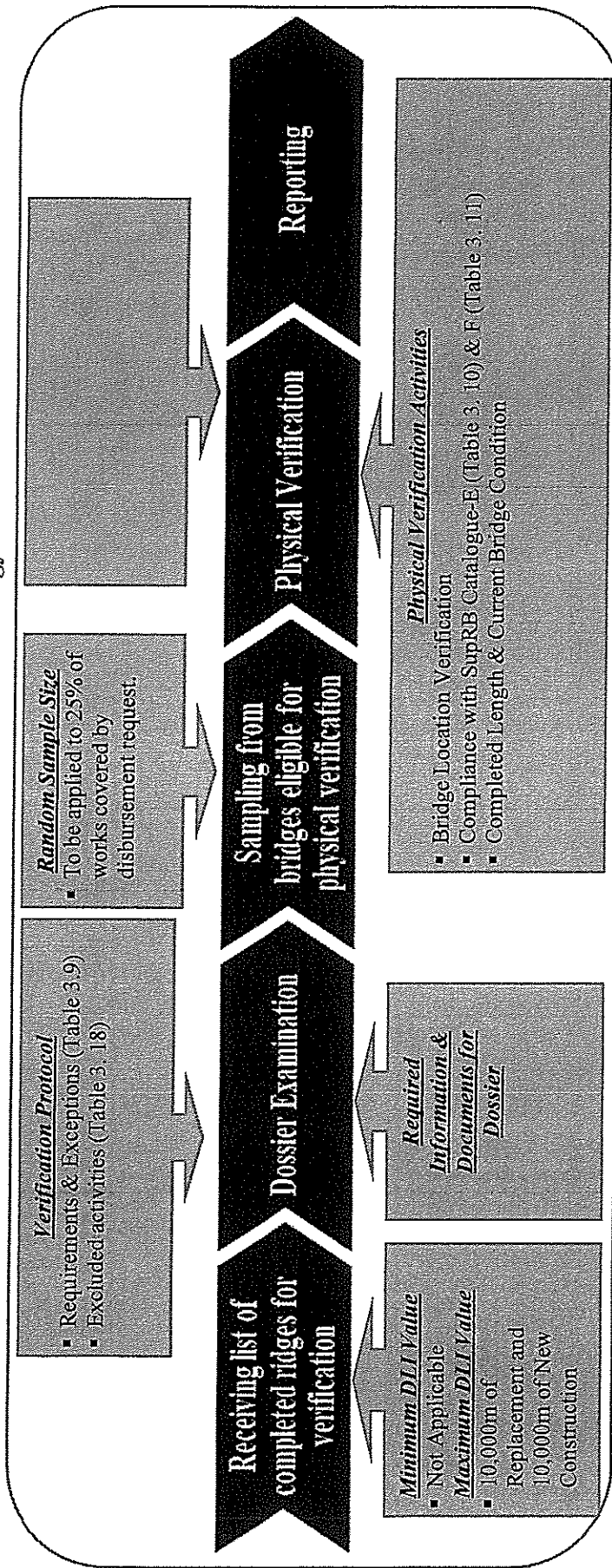
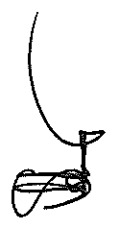
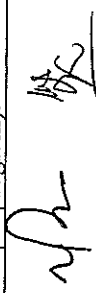


Table 3.9: DLI 5 Verification Protocol Achievements

Requirements		Exceptions
i. Completion of one or more replacement or new construction works as defined in Table 3.19 and physical verification of state of good condition bridges listed in Catalogue-E (Table 3.10) & F (Table 3.11)		▪ Unless site conditions demand partial solutions as the only practicable option. ▪ Maximum 10 percent of the DLI value as defined in Table 3.19 will be eligible for structures over with length 3 meters and up to 6 meters (applicable for 1st year program).
	ii. The bridge is identified for capacity expansion works in the prioritized annual work plan generated through the RuBIMS.	▪ Before the finalization of RuBIMS the prioritization should be based on the criteria set forth in Table 3.20 ▪ The first-year program has been agreed based on 2017/18 condition surveys but prioritized manually following Table 3.21 as RuBIMS was still under development. This will be an acceptable basis for determining agreed bridges (applicable for 1st year program).





iii. The bridge appears in the annual work plan which is the basis for funding through the budget cycle.	▪ None
iv. <u>Implementation of the work plan in line with a time bound procurement plan.</u>	▪ None
v. Environmental and Social risks assessed and risk mitigation measures implemented as per ESMF (Environmental and Social Management Framework) provisions.	▪ None
vi. Approval and implementation of 'Quality Assurance Plan' following the item of works involved in replacement for individual bridge.	▪ None
vii. Achievement will be attained based on the cumulative number of meters of completed bridges and will be counted toward this DLI.	▪ None

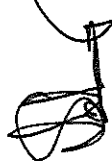






Table 3. 10: Catalogue - E: Replacement

Catalogue - E: Replacement			
All Type of Bridges (length < 100m)			
Major Scope	Existing Structure Condition		Description of Items
	Super Structure	Sub-Structure	
Replacement of existing arch masonry, lightweight, iron bridges, and wooden bridges (if structural review suggests replacement)	n.a.	n.a.	Replacement of existing structure with new bridge (Carriage width ≥ 5.5 m)
Replacement of existing bridge (if carriage width ≥ 5.5 meters and structural review suggests replacement)	Good (CS1)/ Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Severe (CS4)	Replacement of existing structure with new bridge (Carriage width ≥ 5.5 m)
Replacement of existing bridge (if carriage width ≥ 5.5 meters and structural review suggests no rehabilitation)	Good (CS1)/ Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Poor (CS3)	Replacement of existing structure with new bridge (Carriage width ≥ 5.5 m)
Replacement of existing bridge (if carriage width < 5.5 m)	Good (CS1)/ Fair (CS2)/ Poor (CS3)/ Severe (CS4)	Poor (CS3)/ Severe (CS4)	Replacement of existing structure with new bridge (Carriage width ≥ 5.5 m)
Replacement of existing bridge (if carriage width < 3 meters and structural review suggests no rehabilitation)	Poor (CS3)/ Severe (CS4)	Good (CS1)/ Fair (CS2)	Replacement of existing structure with new bridge (Carriage width ≥ 5.5 m)

Table 3. 11: Catalogue - F: New Construction

Catalogue - F: New Construction		
Major Scope	Description of Items	Criteria
New construction	New construction of bridges (Carriage width ≥ 5.5 m)	- Length < 100 m - Connectivity & Socioeconomic - Without any significant and irreversible social and environmental consequences
New construction	New construction of bridges (Carriage width ≥ 5.5 m)	- Length < 100 m - Adaptation to climate change - Without any significant and irreversible social and environmental consequences
New construction	Continuing construction of incomplete bridges (Carriage width ≥ 5.5 m)	- Length < 100 m - Connectivity & Socioeconomic - Physical progress $< 20\%$ - Without any significant and irreversible social and environmental consequences






DLI # 6: Rural Bridge Information Management System (RuBIMS) - Verification Methodology

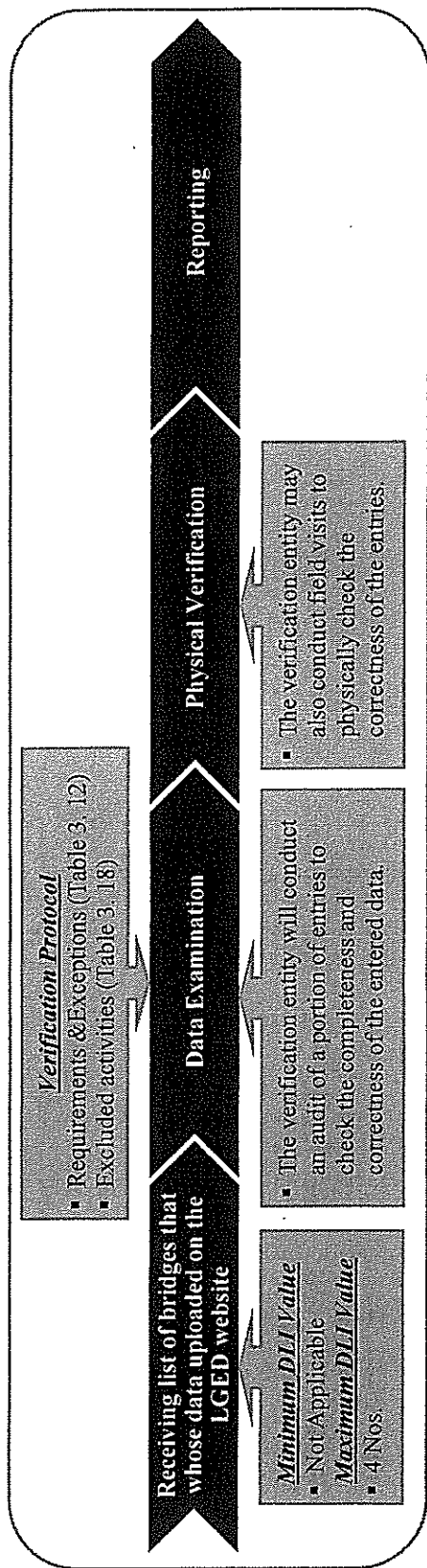


Table 3. 12: DLI 6 Verification Protocol Achievements

Requirements	Exceptions
i. This DLI will measure the progress of operationalization and updating of RuBIMS.	None
ii. Completion of rural bridge data collection in mentioned number of districts.	None
iii. Completion of uploading of data in RuBIMS and publication of the data on the LGED website.	None
iv. Full implementation will be judged when the Project Director has provided evidence of such data collection and uploaded data on the website.	None

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DLI # 7a: Percentage of Contracts included in the e-CM module - Verification Methodology

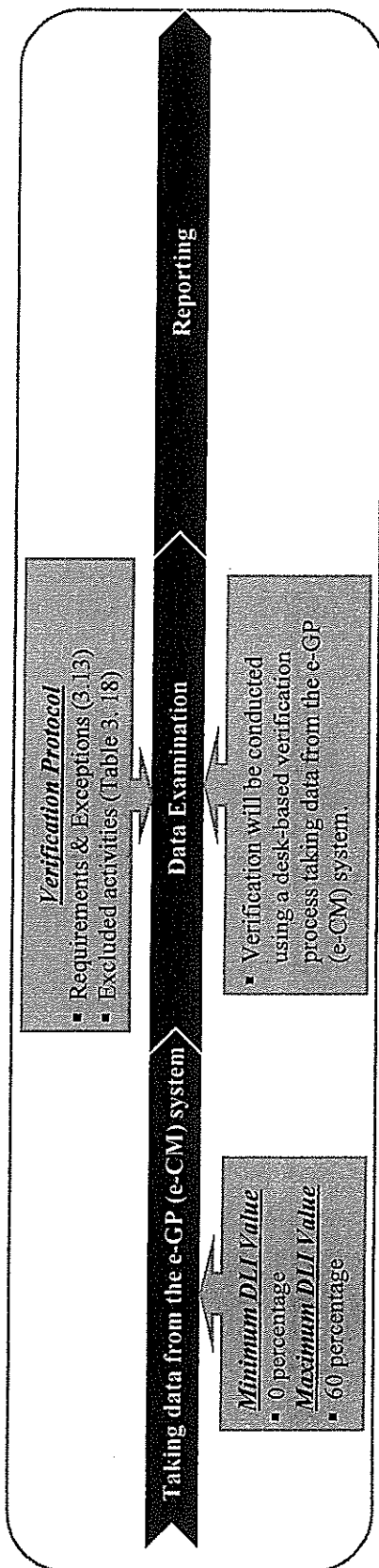


Table 3.13: DLI 7a Verification Protocol Achievements

Requirements		Exceptions
i. This DLI will measure the overall progress of the use of e-CM module of the e-GP for bridge contracts under the Program.		None
ii. Data will be collected every year by checking the use of e-CM module in contract management of the national competitive contracts awarded in that particular year compared to the total national competitive contracts awarded that particular year.		None

DLI # 7b: Percentage of contracts completed on time - Verification Methodology

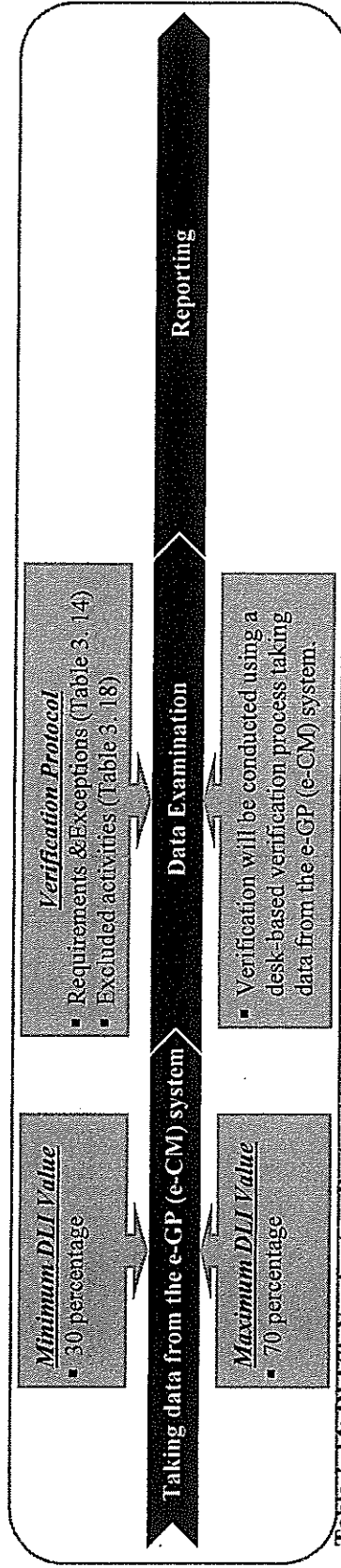


Table 3.14: DLI 7b Verification Protocol

Requirements		Achievements
i. This DLI will measure the overall performance of the LGED in the timely execution of bridge contracts in any one period of the Program.	None	Exceptions

ii. Data will be collected every year taking the contracts completed in that particular year and will compare the actual substantial contract completion time against the original contractual completion time.	▪ None
iii. The target related to the proportion of contracts substantially completed within the original contractual completion time in any one period of the Program. Only the contracts completed within a given year/period will be considered in that year's target achievement calculation.	▪ None

DLI # 7c: Audit committee formation and resolution of audit observations - Verification Methodology

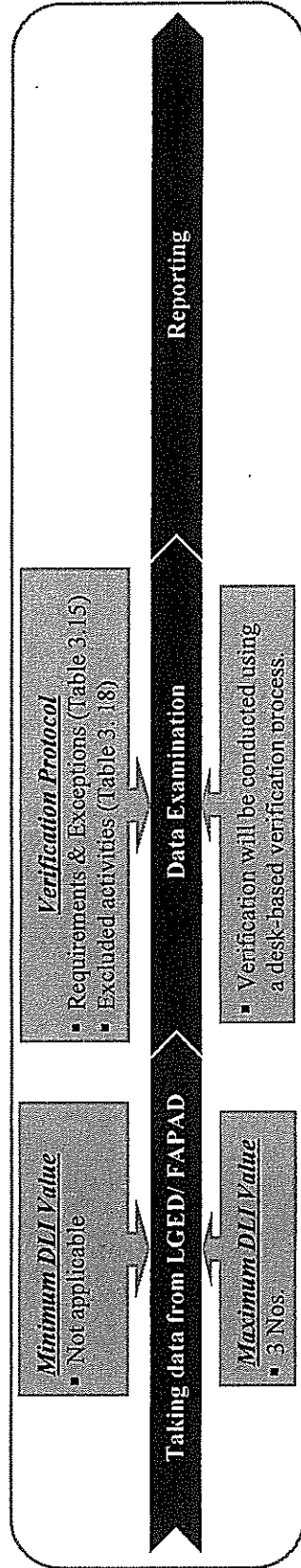


Table 3.15: DLI 7c Verification Protocol Achievements

Requirements	Exceptions
i. This DLI will measure the effective and efficient management of key fiduciary issues.	▪ None
ii. Data will be collected in from 2nd year onward.	▪ None
iii. The DLI target the constitution of an Audit Observation Resolution Committee which will be considered to be formed if it is constituted through an administrative order and minutes of meetings are available.	▪ None
iv. The DLI target regarding the successful completion of at least one internal audit assignment will be considered achieved if the audit was carried out using international standards and practices.	▪ None
v. The DLI target regarding the resolution of audit observations will be considered to be achieved if 80% of the Program's audit observations (since the inception of the Program) are discussed at the Audit Observation Resolution Committee and decisions taken for their resolution.	▪ None







DLI 8a: Adaptation and operationalization of GRS - Verification Methodology

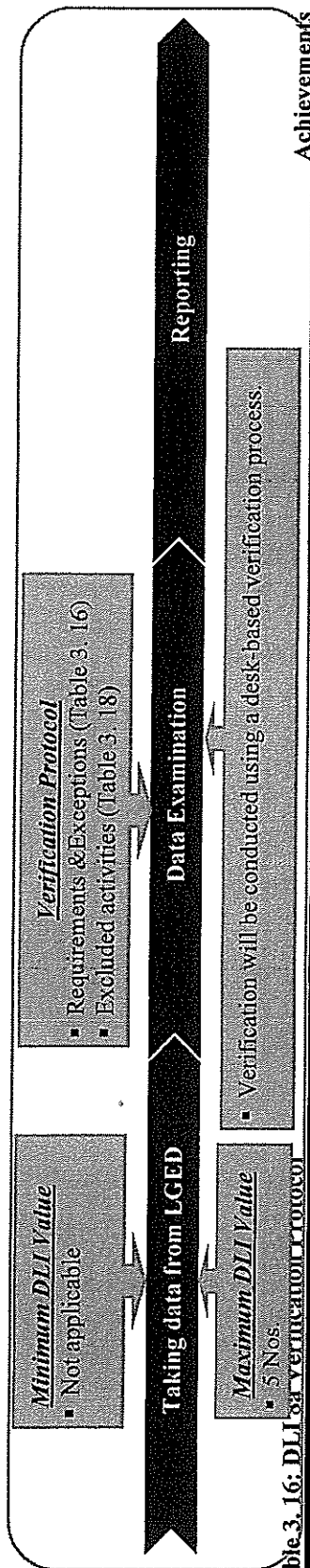


Table 3.16: DLI 8a Verification Protocol

Requirements		Exceptions
This DLI will measure the transparency and accountability of the Program in the form of		
i. Adaptation and operationalization of a GRS, related policies and guidelines, and publication of grievance resolution-related information		▪ None
ii. Data will be collected every year.		▪ None

DLI # 8b: Development and operationalization of smartphone-based field inspection application) Verification Methodology

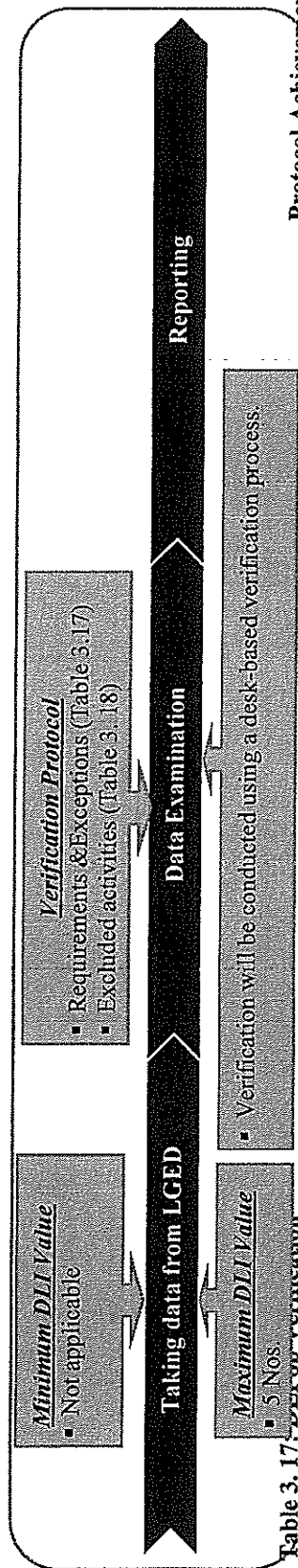


Table 3.17: DLI # 8b Verification Protocol

Requirements		Exceptions
This DLI will measure the transparency and accountability of the Program in the form of		
i. Finalization and operationalization of a tablet- cum smartphone-based application for field work inspection, its use, and publication of field work inspection information.		▪ None
ii. Data will be collected every year.		▪ None

Table 3.18: Excluded activities mentioned in Section II of Financing Agreement

The Recipient shall ensure that the Program excludes any activities which:

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a. in the opinion of the Association, are likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people
b. involve the procurement of: i. works, estimated to cost \$50,000,000 equivalent or more per contract ii. goods, estimated to cost \$30,000,000 equivalent or more per contract iii. non-consulting services, estimated to cost \$30,000,000 equivalent or more per contract or iv. consulting services, estimated to cost \$15,000,000 equivalent or more per contract
c. are financed by any other financier or by the Association under any other loan, credit or grant
d. involve the capacity expansion (widening), replacement and new construction of bridges with a length of hundred (100) meters or above
e. involve any construction of bridges in environmental sensitive areas, such as Recipient-listed national parks and conservation areas
f. involve the procurement of works, goods, non-consulting services and consulting services under open tendering method, in which: i. bids are invited and/or rejected based on a percentage above or below the estimated cost; and/or ii. awards using lottery systems are allowed
g. involve the procurement of works, goods, non-consulting services and consulting services contracts in which awarded bids disregard tenderer's qualifications and/or experience requirements







Table 3. 19: Disbursement Table

#	DLI	Bank Financing Allocated to the DLI (US\$)	Of which Financing Available for Prior Results	Deadline for DLI Achievement	Minimum DLI Value to Be Achieved to Trigger Disbursements of Bank Financing	Maximum DLI Value(s) Expected to Be Achieved for Bank Disbursements Purposes	Determination of Financing Amount to Be Disbursed against Achieved and Verified DLI Value(s) ^a
DLI-1	Minor Maintenance	42,000,000	0	Program closure date	n.a.	60,000 m	Disbursement = # of verified meters × US\$700
DLI-2	Major Maintenance	43,000,000	0	Program closure date	n.a.	25,000 m	Disbursement = # of verified meters × US\$1,720
DLI-3	Rehabilitation	75,000,000	0	Program closure date	n.a.	24,000 m	Disbursement = # of verified meters × US\$3,125
DLI-4	Capacity Expansion	40,000,000	0	Program closure date	n.a.	5,000 m	Disbursement = # of verified meters × US\$8,000
DLI-5	Replacement and New Construction	163,000,000	0	Program closure date	n.a.	20,000 m	Disbursement = # of verified meters × US\$8,150
DLI-6	Implementing and updating of Rural Bridge Information and Management System (RuBIMS)	10,000,000	0	Program closure date	n.a.	4 nos.	Disbursement = US\$2,500,000 upon each verified completion
DLI-7	Percentage of National Competitive Tenders' using e-Contract Management module of the Electronic Government Procurement (e-GP)	3,000,000	0	Program closure date	0 percentage	60 percentage	Disbursement = US\$3,000,000 × {(verified percentage – baseline percentage) / (maximum percentage – baseline percentage)} – last cumulative disbursement
	Percentage of works contracts completed with-in the original contractual timeline	4,000,000	0	Program closure date	30 percentage	70 percentage	Disbursement = US\$4,000,000 × {(verified percentage – baseline percentage) / (maximum percentage – baseline percentage)} – last cumulative disbursement
	Effective and efficient Fiduciary System Management	3,000,000	0	Program closure date	n.a.	3 nos.	Disbursement = US\$1,000,000 upon each verified completion



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#	DLI	Bank Financing Allocated to the DLI (US\$)	Of which Financing Available for Prior Results	Deadline for DLI Achievement	Minimum DLI Value to Be Achieved to Trigger Disbursements of Bank Financing	Maximum DLI Value(s) Expected to Be Achieved for Bank Disbursements Purposes	Determination of Financing Amount to Be Disbursed against Achieved and Verified DLI Value(s) ^a
DLI-8	Finalization and operationalization of GRS	5,000,000	0	Program closure date	n.a.	5 nos.	Disbursement = US\$1,000,000 upon each verified completion
	Development and operationalization of smartphone-based field inspection application	5,000,000	0	Program closure date	n.a.	5 nos.	Disbursement = US\$1,000,000 upon each verified completion

Note: a. Specify the formula determining the level of World Bank financing to be disbursed on the basis of level of progress in achieving the DLI, once the level of DLI achievement has been verified by the World Bank. Such formula may be of various types, including pass/fail, linear, or other types as may be agreed between the World Bank and the borrower.

Table 3. 20: Program Scope Selection and Prioritization

Program Scope	Location Information	Inventory System	Selection Criteria ^a	Ranking Items	Prioritization Criteria	Catalogue	Technical References
Minor Maintenance	The GoB's gazette notification dated October 29, 2017	RSDMS	1. 61 districts (Excluding Bandaran, Khagrachhari & Rangamati) 2. UZR and UNRs 3. Program Operational Strategy following the POM. 4. Length <100 meters (capacity expansion and replacement)	- Bridge Structural Deficiency (SD) Score - Traffic Volume (TV) Score - Socio-Economic (SE) Score	Total Score = Bridge Structural Deficiency (65%) + Traffic Volume (15%) + Socio-Economic (20%)	A	- LGED Road Design Manual - LGED Road and Bridge Design Standard - LGED Specifications for Road and Structure Works - LGED Rate Schedule (all latest versions)
Major Maintenance							
Rehabilitation							
Capacity Expansion							
Replacement	GoB's gazette notification dated October 29, 2017	RSDMS	1. 61 districts (Excluding Bandaran, Khagrachhari & Rangamati) 2. UZR and UNRs 3. Length <100 m 4. Program Operational Strategy 5. Physical progress <20% (for incomplete bridges)	- Road Connectivity (RC) Score - Socioeconomic (SE) Score	Total Score = Road Connectivity (50%) + Socio-Economic (50%)	F	
New Construction							

Note: a. All selected bridges and structures must be without any significant and irreversible social and environmental consequences.

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Table 3. 21: Selection and Prioritization Criteria for SupRB First-year Program

Sl. No.	Program Scope	DLI	1st Year Program		Scope of Works
			Selection Criteria	Priority Ranking	
1	Minor Maintenance	DLI-1	- Following 'Program Boundary' - Type of Structure: All types of bridges (excluding arch masonry, lightweight, iron, and wooden bridges) - Length > 3 m - Carriage Width ≥ 3 m - Age of Structure > 1 year - Following 'Program Operational Strategy in the POM'	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-A
2	Major Maintenance	DLI-2	- Following 'Program Boundary' - Type of Structure: All types of bridges (excluding arch masonry, lightweight, iron, and wooden bridges) - Length > 3 m - Carriage Width ≥ 3 m - Age of Structure > 5 years - Following 'Program Operational Strategy in the POM'	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-B
3	Rehabilitation	DLI-3	- Following 'Program Boundary' - Type of Structure: All types of bridges (excluding arch masonry, lightweight, iron, and wooden bridges) - Length > 3 m - Carriage Width ≥ 3 m - Age of Structure > 10 years - Following 'Program Operational Strategy in the POM'	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-C
4	Capacity Expansion	DLI-4	- Following 'Program Boundary' - Type of Structure: All types of bridges (excluding arch masonry, lightweight, iron, and wooden bridges) - Length > 3 m < 100 m - Carriage Width < 3 m - Following 'Program Operational Strategy in the POM' - Land Acquisition: No acquisition	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-D
5	Replacement	DLI-5	- Following 'Program Boundary' - Type of Structure: Arch masonry, lightweight, iron, and wooden bridges - Length > 6 m < 100 m - Following 'Program Operational Strategy in the POM' - Land Acquisition: No acquisition	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-E
6	New Construction	DLI-5	- Following 'Program Boundary' - Length < 100 m - Physical Progress < 20% (for incomplete bridges) - Following 'Program Operational Strategy in the POM' - Land Acquisition: No acquisition	Total Score = Road Connectivity Score (RC-50%) + Socioeconomic Score (SE-50%)	Catalogue-F







Intermittent/Annual Reports Format

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