

SBF Project Completion Note

India: Gujarat Rural Roads (MMGSY) Project

1. Project Information

Project ID:	000025	Investment Number:	L0025A
Member:	India	Region:	Southern Asia
Sector:	Transport	Sub-sector:	Rural Road
Financing Type:	<input checked="" type="checkbox"/> Loan <input type="checkbox"/> Guarantee	E&S category:	B
Co-financier(s):	Not applicable		
Borrower:	Republic of India		
Guarantor:	None		
Implementing Agency:	Roads and Buildings Department (R&BD), Gujarat		
Project Team Leader(s):	Roberto Salgado, Investment Operations Specialist Anzheng Wei (EX-PTL), Investment Officer Hari Bhaskar (EX-PTL), Senior Investment Operations Specialist		
Project Team Members:	Yogesh Malla, Financial Management Specialist Giacomo Ottolini, Senior Procurement Specialist (Consultant) Dr. Somnath Basu, Principal Social Development Specialist Dr. Yitzhak Kamhi, Senior Operations Advisor (Consultant)		
Lender's Advisor/ Engineer:	None		
Site Visits by AIIB:	Oct. 9-13, 2017 of the 1st Visit Feb. 22-24, 2018 of the 2nd Visit Apr. 22-24, 2018 of the 3rd Visit Dec. 10-12, 2018 of the 4th Visit Jun. 18-22, 2019 of the 5th Visit Jan. 20-24, 2020 of the 6th Visit		

2. Project Summary and Objectives

To improve the road transport connectivity by providing all weather rural roads to about 4,000 villages in all the 33 districts of the state of Gujarat.

3. Key Dates

Approved:	July 04, 2017	Signed:	August 04, 2017
Effective:	October 26, 2017	Restructured (if any):	N/A
Orig. Closing:	December 31, 2019	Rev. Closing (if any):	N/A

4. Disbursement Summary (USD million)

a) Committed:	329.0	b) Cancelled (if any):	N/A
c) Disbursed:	329.0	d) Last disbursement: (amount /date)	123.03 / Jul 6, 2020

e) Undisbursed (if any):	0	f) Disbursement Ratio (%) ¹ :	100.0
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5. Estimated and Actual Costs

The Project realized savings of over 30% from estimated costs to actual costs at closing. The factors that likely contributed to the savings included procurement process efficiency, implemented through an e-tendering system, and a high level of competition achieved through a National Competitive bidding process. For Component 3, the savings were due to the government's decision to develop a digitized map of Gujarat's rural roads network through another government-financed program and thus the scope was not undertaken. For Component 4, the scope was not undertaken as questions related to the impact and safety to the groundwater from the proposed innovative technologies, in the form of additives and treatments in road construction, was not clear. Noticing the large amount of the savings, the Department of Economic Affairs (DEA) and the State Government of Gujarat requested and agreed with AIIB to increase the share of the project costs by the AIIB loan so as to fully utilize the loan. The Loan Agreement was amended accordingly.

Item	Estimated Costs USD million	Actual Costs USD million	Financing Allocation					
			AIIB Original Commitment USD million (Share %)	AIIB Actual Commitment USD million (Share %)	Borrower's Original Commitment USD million if any (Share %)	Borrower's Actual Commitment USD million if any (Share %)	Borrower's Original Budget USD million (Share %)	Borrower's Actual Costs USD million (Share %)
A. Base Cost								
<u>Component 1</u> Construction and Upgradation of Non-Plan Roads	410.00	248.98	203.0 (49.5%)	203.07 (81.6%)	207.00 (50.5%)	45.91 (18.4%)	410.0 (100.0%)	248.98 (100.0%)
<u>Component 2</u> Construction and Upgradation of Plan Roads	242.00	152.95	120.0 (49.5%)	124.75 (81.6%)	122.00 (50.5%)	28.20 (18.4%)	242.0 (100.0%)	152.95 (100.0%)
<u>Component 3</u> Technical Assistance	3.00	0.44	3.0 (100.0%)	0.36 (81.6%)	0.00 (0.0%)	0.08 (18.4%)	3.0 (100.0%)	0.44 (100.0%)
<u>Component 4</u> Experimental roads with innovative technologies	2.18	0.01	2.18 (100.0%)	0.00 (0.00%)	0.00 (0.0%)	0.00 (0.0%)	2.18 (100.0%)	0.00
Total Base Cost	657.18	402.37	328.18 (49.9%)	328.18 (81.6%)	329.00 (50.1%)	74.19 (18.4%)	657.18 (100.0%)	402.37 (100.0%)

¹ Disbursement Ratio is defined as the volume (i.e. the dollar amount) of total disbursed amount as a percentage of the net committed volume, i.e., $f = c / (a - b)$

B. Front-End Fees	0.82	0.82	0.82 (100.0%)	0.82 (100.0%)	0.0 (0.0%)	0.0 (0.0%)	0.82 (100.0%)	0.82 (100.0%)
Total	658.00	403.19	329.00 (50%)	329.00 (81.6%)	329.00 (50.0%)	74.10 (18.4%)	658.0 (100.0%)	403.19 (100.0%)

6. Project Implementation, including major changes to the original Objective, Project Design, and Indicators

The Project was implemented following the original timeline from Aug. 2017 to Dec. 2019. The Technical Audit consulting firm appointed for implementation monitoring completed the Intermediate/Final Review Report in December 2019. The report was updated in March 2020 and June 2020. Based on the report, there were no major project implementation issues. The Project achieved over 95% of the targets and refer to Section 8 for further clarification.

Components	Physical Progress*	Environmental & Social Compliance	Procurement	Financial Management
<u>Component 1</u> Construction and upgradation of Non-plan roads (USD203 million)	95.9% Completed	In compliance	100% Completed	Pre-Audit Financial Statements covering Apr. 1, 2019 to Dec. 31, 2019 received on June 8, 2020
<u>Component 2</u> Construction and upgradation of Plan roads (USD120 million)	96.3% Completed	In compliance	100% Completed	
<u>Component 3</u> Technical Assistance (USD 3 million) Note: Overseas study tour not undertaken	Not Applicable	Not Applicable	100% Completed	
<u>Component 4 **</u> Experimental roads with innovative technologies (USD2.18 million)	0.0% Completed	Not Applicable	0.0% Completed	

* at Loan Closing on Dec. 31, 2019

** Component not undertaken

7. Implementation of Environmental and Social Policy (ESP) and project specific environmental and social (E&S) instruments, including the project level Grievance Redress Mechanism (GRM)

The end-term evaluation of the E&S performance of the Project indicated that the Project was satisfactorily implemented in conformity with AIIB's ESP. Screening of all project activities were conducted and subsequent monitoring of the implementation of the Environmental Management Plan (EMP) indicated that all social and environmental safeguard measures were addressed. Project implementation included extensive consultations which were documented in the end-term evaluation report. Participation of women were a highlight of these village-level consultations. The construction process included feedback received from the community during the consultations.

A GRM was put in place for a cluster of subprojects with representation from every subproject. The nature of community concerns regarding the project were such that they could be resolved in consultation with the Contractors with immediate effect. Moreover, community members started approaching the Local Self Government (which is a natural platform for grievance redress in the village level) with their concerns very often, and hence the Local Self Governments started playing the role of GRM. The concerns were of low magnitude (regarding place of unloading of construction materials, removal of construction debris, etc.) which could be addressed with immediate effect with the help of the Village Head (Sarpanch).

There were no formal NGO Complaints, but PWESCR International, an NGO based in Delhi visited the project site and reported sexual harassment of women workers and irregularities in payment of wages. The matter was investigated by a Joint Mission of AIIB and Gujarat Roads Department, which found no evidence, even circumstantial, of instances of sexual harassment or irregularity in payment of wages. The findings of the investigation were reported to the AIIB management. The matter was clarified to the representative of PWESCR in a face-to-face meeting on the sidelines of the Fourth Annual General Meeting (AGM) in Luxembourg in July 2019.

8. Results Achieved (against the original indicators and/or revised indicators)

The Project achieved its objective of improving rural road all-weather connectivity to 4,000 villages in all 33 districts of Gujarat. Road connectivity was improved to over 6,500 villages across and the Project completed 13,581.67 km of rural roads improvements, over 95% of the target by Dec. 31, 2019. The overall MMGSY program will provide good all-weather road connectivity to 17,843 villages and to 20 million people and will be implemented in phases, of which the Project is Phase I. The Project design was appropriate for achieving the intended objective. Work continued into 2020 for 810.5 km of road works which faced completion delays due to the previous monsoon season, which was heavier and longer than expected, and which impacted the construction period and progress of the works. The work completed after project closing was fully funded by the Government of Gujarat. For Indicator 2.2, issues such as land availability and stretch of road passing through reserved forest areas affected meeting target. For Indicator 2.4, works could not be completed by closing date due to impact of monsoon on work progress. Road improvements that could not be completed under this project will be included in the Gujarat Rural Roads Phase II, under preparation.

The MMGSY was originally created and prepared as a Gujarat state government project with no multilateral development bank financing planned. The Results Framework was developed when AIIB agreed to finance the project. The differences between the Targeted End Target and Actual End Target in 2019 reflects a project whose scope was dynamic over the two-year implementation period as more road segments that connect dense villages were added to the scope of the project, thus significantly increasing the number of villages with connectivity and number of beneficiaries.

Project Objective Indicators	Unit of Measure	Baseline (2016)	2017		2018		End Target 2019	
			Target	Actual	Target	Actual	Target	Actual
1.0 Total Beneficiaries	People Million	0	3	5	6	15	8	21
2.0 Villages with new first connectivity	No.	0	47	150	291	400	364	698
3.0 Villages with new second and third connectivity	No.	0	450	800	1950	3000	3650	5902
<i>Average traffic volume on sample Project Roads</i>								
4.1 Non-plan roads	Vehicle, AADT	119	132	132	145	145	160	160
4.2 Plan roads	Vehicle, AADT	370	411	411	452	452	497	585
Intermediate Result Indicators	Unit of Measure	Baseline (2016)	2017		2018		End Target 2019	
			Target	Actual	Target	Actual	Target	Actual

Non-plan roads

1.1 New construction	Km	0	656	685	4035	4200	5044	4743
1.2 Resurfacing	Km	0	453	475	2014	2200	2518	2285
1.3 First connectivity of villages	Km	0	77	90	474	480	593	540
1.4 Construction of Missing link/ structure	No.	0	3	5	55	50	69	62 (in km 14.13)

1.5 Approaches to school and colleges	Km	0	0	0	2	1.8	2	1.8
1.6 Construction and maintenance of roads passing through tribal areas	Km	0	12	20	186	190	233	205

Plan roads

2.1 Upgradation of metal to black- top surface	Km	0	31	50	165	170	206	210
2.2 Upgradation of earthen to black-top surface	Km	0	36	25	190	100	237	165
2.3 Resurfacing of village and other district roads	Km	0	877	855	3509	3510	4386	3980

2.4 Upgradation of existing causeway/ deep to high- level bridge	No.	0	1	4	18	8	24	10 (1.88 in km)
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2.5 Plan roads- Widening of village and other district roads	Km	0	161	154	1285	1400	1606	1435
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Institutional Strengthening Program

3.1 Computer System Development	Percent (%)	0%	0%	0%	30%	100%	100%	100%
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9. Investment Sustainability (operational, financial/commercial, institutional)

The Project's total investment program is likely to be sustainable. The civil works contracts under the Project contain a provision requiring contractors to maintain the roads built by them for five years post-construction. Such provision helps R&BD ensure road maintenance for the first five years of operation while increasing its institutional capacity for road maintenance. After this period, the R&BD's own engineers will be responsible for road maintenance, funded through the state government budget, with planned resurfacing works of the roads every 7th years and depending on physical conditions and traffic, overlay after 10 years.

The R&BD noted that its 2020-2021 road maintenance budget for the roads under the Project scope (MMGSY 2016-2017 road investment) is approximately USD 4.5 million, adequate as most road maintenance for the project roads are covered under the 5-yr contractual maintenance period. In the long term, the operational sustainability risk stems from ensuring adequate and proper maintenance funding allocation in the face of an expanded road network. The budget allocation to rural roads development has seen an increase of approximately 20% every year and is expected to do so in future. This will ensure enough funds availability for further upgradation of rural roads, cover resurfacing costs every 7th year, and for the upkeep and maintenance of the roads constructed and strengthened under the MMGSY.

Regarding Institutional sustainability, the project has helped improve asset management practices which are expected to significantly enhance the sustainability of the rural roads program. R&BD adopted the quality monitoring system (QMS) successfully implemented in another rural roads program, the central government-funded Prime Minister's Rural Roads Program (PPGSY). The QMS consists of three tiers of monitoring and control. The first tier

comprises R&BD in-house resources, the second tier comprises state quality monitors (SQM) appointed by R&BD and the third tier is comprised by senior technical personnel appointed as Independent Quality Monitors (IQM). The SQM better equips R&BD to monitor quality across the 4600 civil works and 33 districts. In addition, a web-based Road Project Monitoring System (RPMS) was developed. The web-based database tool, with timely and consistent data input, helped track project physical and financial progress and the status of quality monitoring. The Project provided a venue for decentralized project implementation and training provided through the investment program equipped R&BD staff with skills to identify, implement, and supervise projects.

10. Compliance and Alignment with AIIB's Policies and Strategic Priorities

The overall implementation of the project satisfactorily complied with AIIB's Policies. Compliance with AIIB's Procurement Policy (PP), ESP, and financial management are highlighted due to the scale of the number of civil works and civil works contracts of the Project. The Project consisted of over 4600 civil works and over 1600 work package contracts. All civil works procurements under the investment program complied with AIIB's Procurement Policies and followed national competitive bidding procedures and implemented via e-tendering system. Over 1000 contracts had been awarded prior to loan signing, thus advanced contracting and retroactive financing provisions under the policies were utilized. Through the Technical Auditor and during AIIB's supervision missions in 2017 and at project closing in 2019, representative contract samples were evaluated for procurement processes and contract management compliance and no evidence of material breaches of the agreed procurement arrangements was found, and no procurement complaints were recorded. Minor issues related to procurement documentation were noted, but no material deviations from AIIB's Procurement Policy.

In regard to ESP compliance, it was previously noted in this Completion Report that the end-term evaluation of the E&S performance of the Project indicated that the Project was satisfactorily implemented in conformity with AIIB's ESP. Screening of all project activities were conducted and subsequent monitoring of the implementation of the Environmental Management Plan (EMP) indicated that all social and environmental safeguard measures were addressed. Regarding Financial Management, during AIIB's supervision missions starting 2017, through implementation, and at project closing in 2019, based on sample-based reviews and discussions, the books of accounts appeared to be maintained adequately and according to the Govt. rules and regulations. There were no outstanding Interim Unaudited Financial Reports (IUFR) or the Project audit reports at project closure and discussion with R&BD focused on final withdrawal application, the smooth financial closure of the Project, and timely compliances of the remaining financial management covenants. Minor issues related to adjustments due to ineligible expenditures were observed, but no major issues related to the Project's financial management.

The Project is aligned with AIIB's Transport Strategy as it aimed to upgrade existing infrastructure and improve connectivity in rural areas through the development of rural access roads. It also fully supports Government of India's strategy to achieve development goals of economic growth and poverty reduction. After 2.5 years of project implementation, the Project provided last mile connectivity for over 4000 villages across the 33 districts of Gujarat and significantly improved connectivity between rural communities and workplaces, markets, social and health services, and education facilities.

11. Any outstanding issues not yet resolved, if applicable

None. There was one outstanding issue at Project closing on December 31, 2019, i.e., the required Environmental & Social (E&S) Compliance Report was not completed in time to document implementation compliance with the Project's Environmental and Social Management Planning Framework (ESMPF). AIIB discussed the issue with R&BD which agreed to engage a Consultant to prepare the compliance report. The E&S Compliance Report was completed in June 2020.

12. Lessons Learned and can be considered for the future investments

The Project was implemented smoothly, and the project objective was achieved successfully. An important factor was the cooperation, support, and commitment of R&BD extended during the entire period of the Project implementation, from initiation to project close. The high levels of engagement as well as the continuous

professional interaction between R&BD's top-level management and staff and the AIIB team brought this project to full, timely, and orderly completion.

The investment program of such a significant civil works volume scale and geographic scope allowed both R&BD and AIIB to gain experience in rural infrastructure development and implementation and identify areas for improvement. The effort to adequately oversee and monitor over 4600 civil works and manage over 1600 contract packages scattered across 33 districts presented a significant challenge to R&BD and AIIB. Some of the lessons learned are listed below and which could be considered for future projects in the sector include:

- **Technical Auditor/Quality Oversight and Monitoring.** AIIB engaged a Technical Auditor which conducted sample-based audit and evaluation of technical, financial, E&S compliance of randomly selected components of each group of works. The technical auditor was paid for by AIIB, but in the future could be paid for by the Borrower directly or under the loan, to strengthen the borrower's project management capacity. The scope of the Technical Auditor included sample-based audits of quantity and quality assurance control of each category of works by selectively and randomly conducting site visits and visits to contractors, supervision engineers, and R&BD. The Technical Auditor enhanced AIIB's quality monitoring and coverage of supervision activities over thousands of individual sites and scattered geographic coverage.
- **Road Project Monitoring System (RPMS).** The web-based monitoring system, a database tool, was developed by the PMC to monitor, among other parameters, the physical and financial progress of the Project and the status of quality monitoring. The value of the tool was based on its accessibility from any computer, with username and password-protected access, taking into consideration the geographic coverage (33 districts) and number of civil works contracts under the Project. Timely and consistent data input was key to the successful application of the tool to track and monitor progress and quality.
- **Sub-project packaging and procurement.** For the Project, it is important to note and emphasize the overall efficiency of the delivery of project procurement, the level of competition achieved in terms of participation, and value-for-money achieved. The PDS was well conceived and fit for purpose. Nonetheless, awarding, managing, and monitoring over 1600 contract packages represented a challenge and strain on resources. Future programs of such scale and geographic coverage could benefit from "right sizing" to larger work packages for fewer overall work package contracts to ease administrative burden while maintaining healthy levels of competition and delivering value-for-money. In addition, "right sizing" can help achieve cost savings and efficiency improvements through savings contractor mobilization or demobilization costs, sharing of equipment, and sharing overhead costs.
- **Contract Management.** R&BD could strengthen its in-house capacity for technical quality assurance and contract management. Despite the three levels of quality monitoring under the QMS, there was a repetitive weakness in attention to construction of road shoulders in some of the civil works. Once R&BD became aware, the issue was noted to the Contractor for correction. Strengthening its quality assurance and contract management capacity would enable R&BD to deal with contractual issues at earlier stages of implementation for proper and timely corrective action. This also has implications for the 5-year maintenance provisions in the civil works contracts as R&BD must provide strong and robust contract management to ensure the contractors meet their contractual obligations and the contracts deliver value-for-money.
- **Cost Savings.** The Project realized savings of over 30% from estimated to actual costs. Procurement efficiency likely factored about 2/3 of the total estimated versus actual costs variance. Other factors included taxes and duties and a 2.5% contract value retention for contractual maintenance requirements. The construction cost estimates are derived from published cost rates by the State of Gujarat and bills of quantities (BOQs) calculated during project preparation. The contractors thus bid on cost rates and in a procurement environment with healthy competition, the winning bids will reflect competitive pricing. The main lesson learned is that published cost rates may not accurately reflect how contractors may price the bids and underscores the importance of a robust understanding of the local construction industry and market.
- **E&S Reporting.** At closing, the Project's semiannual Environmental and Social Monitoring Report was outstanding for more than 6 months and R&BD had not put in place arrangements to prepare the project completion report to document the Project's ESMF Compliance, a requirement to close the project. For future

rural roads investment programs, AIIB and R&BD should agree early to engage the implementing agency's PIU E&S staff to prepare the semiannual E&S monitoring reports or for R&BD to engage a third-party consultant to compile project E&S documentation and prepare the semiannual monitoring reports and E&S compliance final reports. The granularity and geographic reach of the investment program underscore the importance of robust E&S monitoring and compliance documentation.

- **Financial Management.** R&BD could give attention on strengthening its finance and accounts staff in managing externally funded projects. For the project of similar size and scope, it could also hire additional financial management resources at the regional or district level to provide more hands-on support to field offices. It could also work on strengthening its accounting practices and systems by adopting double entry bookkeeping and using Information Technology (IT) in planning, accounting, and reporting. This may help in getting real time financial data, minimize reconciliation issues and assist the management in monitoring and timely decision making. Considering some internal control weaknesses noted in this project, strengthening the internal control procedures, and using internal audit for period review could support the management on timely corrective actions.

1. Are the services and support provided by the Project Team professional, sufficient, and in time, during project preparation and project implementation? [please provide some specifics or examples as an illustration.]

Yes. The AIIB team provided timely, adequate, and timely support to R&BD and the PMC throughout project implementation from the Identification mission to the Project Close mission. During the first implementation mission in October 2017, the AIIB Team conducted live demonstration of the RMPS software as well the practical use of software features, such as currency conversion and document uploads flags and alerts, to maximize the value of the tool for project monitoring and supervision and to improve the productivity of the users. Also, the AIIB Team provided constant guidance and support to R&BD to implement the E&S safeguards. This included ready assistance during public consultations and the establishment of the project's GRM. Furthermore, the AIIB Team provided support in other areas such as financial management by guiding the R&BD staff and consultants through the withdrawal application preparations, preparation of terms of reference for external auditors, and loan agreement amendments.

2. Is it convenient to access to the Project Team's services and support?

Yes. The AIIB has been easily accessible for services or support throughout project implementation. The communications channels amongst RB&D, PMC, and AIIB project teams include mobile phones, email, videoconferencing, and voice or text communications applications. No issues have been experienced with the time difference of between Ahmedabad and Beijing. The most recent example of constant communications via email, communications applications, and videoconferencing amongst R&BD, PMC and the AIIB Project Team has involved the activities related to project closure, the preparation of two loan agreement amendments, and the preparation of the final withdrawal applications. For the final withdrawal applications, the PMC and Project Team have had videoconference to discuss pre-audited financial statements, statement of expenditures, disbursement claims, and review the analysis of final project cost loan share percentage between AIIB and Gov. of Gujarat.

3. Does the Project Team demonstrate flexibility and efficiency during project preparation and project implementation? [please provide some specifics or examples as an illustration.]

Yes. The AIIB Project Team was flexible during project preparation and implementation. In particular, the AIIB Team was flexible with the use of country bidding documents and national procurement process used under MMGSY after it assessed that the process was adequate, with adjustments to satisfy AIIB policy requirements.

4. What is the value addition of AIIB's financing in the Project?

The value of AIIB financing also includes the support and guidance provided to the PIU to implement best practices. Other elements of AIIB financing value addition include: (i) ensure design consistency across the Project; (ii) enhanced quality and safety aspects through better design, implementation and maintenance; (iii) improved sustainability of the roads by including road maintenance requirements in contract procurement packages; (iv) management of environmental and social risks and impacts during Project implementation, as required by AIIB's Environmental and Social Policy and Environmental and Social Standards; and (v) similar programmatic approaches are likely to be followed in implementing rural road infrastructure activities in other states across India and in other emerging economies in Asia.

5. Will you consider working with the AIIB again in infrastructure development? Please provide a few specific reasons.

Yes. Gujarat is actively developing its infrastructure with many other projects under consideration and in need of financing and which Gujarat would be pleased to partner with AIIB.

6. Do you have any suggestion to the Project Team and/or the AIIB?

Below are a few points to consider:

- AIIB may consider appointing a liaison consultant or AIIB representative in Gandhinagar during project implementation to support AIIB implementation missions.
- AIIB may consider variable commitment charges to loan projected savings if early in implementation there are indications of likely savings.
- AIIB may consider providing standard forms at the beginning of implementation to provide project feedback.
- AIIB may consider appointing an independent consultant or an NGO at the beginning of implementation for consultations and E&S management.

7. Other comments (such as comments on the reporting requirements, approval of project changes, etc.)

None