

# GOVERNMENT OF KERALA PUBLIC WORKS DEPARTMENT



## MONTHLY PROGRESS REPORT JANUARY -2021

### KERALA STATE TRANSPORT PROJECT –II UNDER WORLD BANK ASSISTANCE-LOAN NO 8254



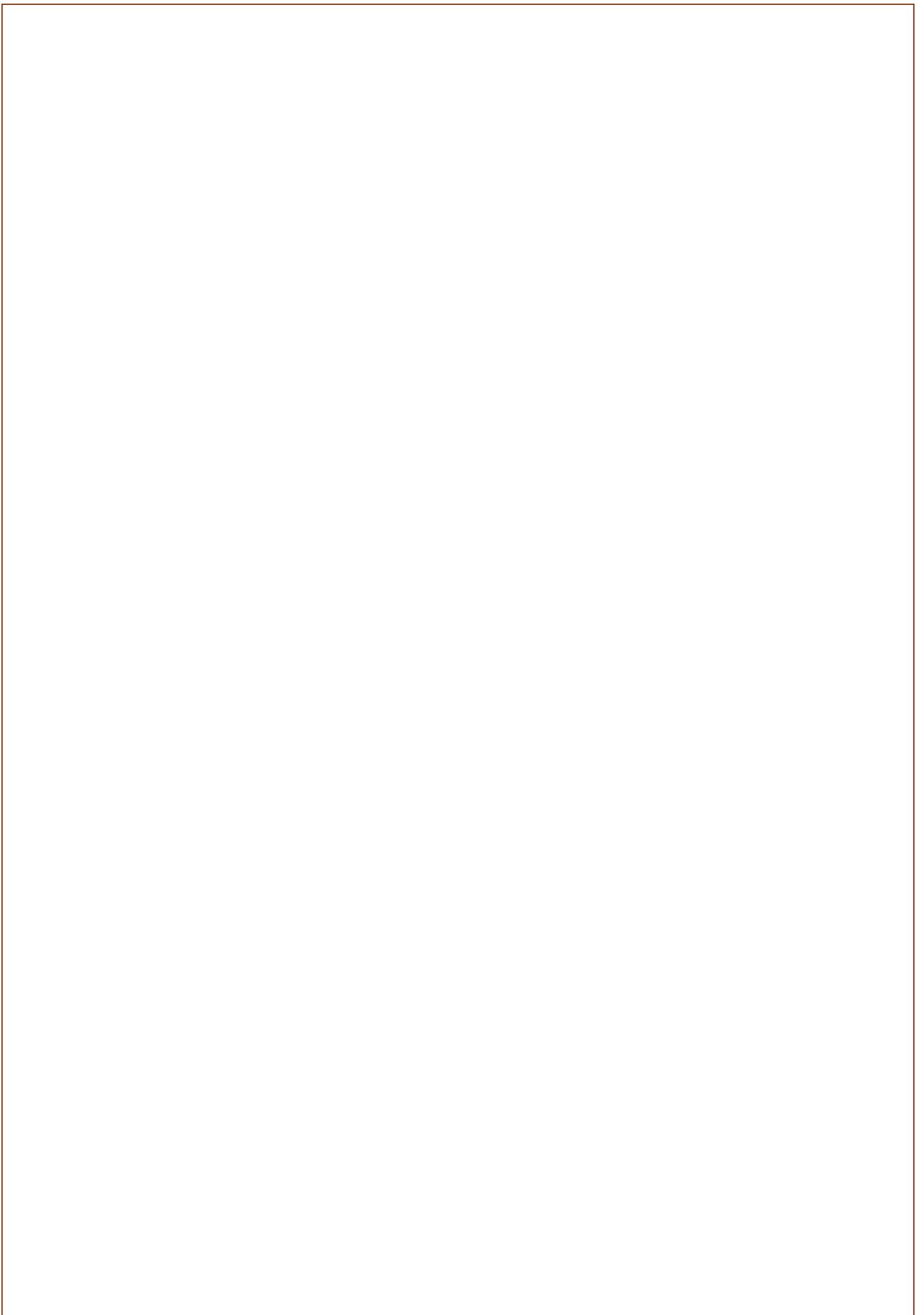
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KERALA STATE TRANSPORT PROJECT  
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## Table of Contents

<b>1 EXECUTIVE SUMMARY.....</b>	<b>1</b>
1.1 INTRODUCTION.....	1
1.2 PROJECT DEVELOPMENT OBJECTIVES.....	1
1.3 PROJECT COMPONENTS .....	1
<b>2 PLANNING &amp; OVERALL IMPLEMENTATION .....</b>	<b>2</b>
2.1 PROJECT STAFFING:.....	2
2.2 PROJECT CO-ORDINATION:.....	2
2.3 COMPONENT A 1 IMPLEMENTATION.....	2
2.4 SUB COMPONENT A2 IMPLEMENTATION .....	2
2.5 COMPONENT B – ROAD SAFETY MANAGEMENT IMPLEMENTATION .....	2
2.6 COMPONENT C – INSTITUTIONAL STRENGTHENING IMPLEMENTATION.....	3
2.7 COMPONENT D – RKI FLOOD WORK IMPLEMENTATION BY KfW& WORLD BANK .....	3
2.8 SIX POINT ACTION PLAN AND ACTION TAKEN– IMPLEMENTATION.....	4
2.9 QUALITY ASSURANCE: .....	4
2.10 COMPLIANCE OF LEGAL COVENANTS.....	6
<b>3 PROJECT KEY MAP .....</b>	<b>10</b>
<b>4 FUNDING &amp; DISBURSEMENT.....</b>	<b>11</b>
4.1 CURRENT DISBURSEMENT STATUS.....	11
4.2 PROGRESSIVE EXPENDITURE AND AMOUNT REIMBURSED – STATUS AS OF 31 JANUARY- 2021 .....	14
4.3 RESTRUCTURING OF LOAN IN 2019.....	15
<b>5 CURRENT PROJECT STATUS.....</b>	<b>16</b>
5.1 <b>COMPONENT A1:</b> .....	16
5.2 DETAILS OF THE SUPERVISION CONSULTANTS FOR THE PACKAGES UNDER THIS COMPONENT IS AS BELOW .....	17
5.3 SUMMARY AND STATUS OF THE WORKS UNDER COMPONENT A 1, A 2, B, C & D.....	18
5.4 PACKAGES UNDER COMPONENT A1 STATUS .....	20
5.5 PACKAGE 2 -PILATHARA -PAPPINISSERY-SH-67.....	21
5.7 PACKAGE 3B – KALAROAD -VALAVUPARA.....	27
5.8 PACKAGE 4– CHENGANNUR - ETTUMANOOR – MUVATTUPUZHA – SH1 .....	29
5.9 PACKAGE 4A – THIRUVALLA BYPASS .....	30
5.10 PACKAGE 4B– THIRUVALLA TOWN .....	34
5.11 PACKAGE 5– ETTAMANOOR- MUVATTUPUZHA.....	35
5.12 PACKAGE 6-PONKUNNAM – THODUPUZHA – SH 8 .....	35
5.13 PACKAGE 7 -PERIMPILAVU -PERINTHALMANNA.....	36
5.14 <b>COMPONENT A 2:</b> .....	37
5.15 <b>COMPONENT B: ROAD SAFETY COMPONENT.....</b>	51
5.16 MC ROAD - KAZHAKKOOTTAM – ADOOR 78.65 KM.....	57
5.17 ROAD SAFETY CHALLENGE FUND .....	59
5.18 <b>COMPONENT C: INSTITUTIONAL STRENGTHENING COMPONENT – CURRENT STATUS.....</b>	61
5.19 <b>COMPONENT D: REBUILD KERALA INITIATIVE .....</b>	67
5.20 <b>RKI FLOOD WORKS KFW LOAN &amp; WORLD BANK LOAN.....</b>	82
<b>6 SOCIAL SAFEGUARD.....</b>	<b>89</b>
6.1 LAND ACQUISITION STATUS (LA) .....	89
6.2 TREE CUTTING.....	89
6.3 MANAGEMENT OF CONSTRUCTION INDUCED ISSUES .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>7 GRIEVANCE MANAGEMENT REPORT .....</b>	<b>92</b>
7.1 COMPLIANCE OF MISSION RECOMMENDATION.....	93
7.2 PAYMENT TO THE CONSULTANTS AND CONTRACTORS AS ON END OF JANUARY 2021: .....	94
<b>8 COMPLIANCE GOVERNANCE IMPROVEMENT ACTION PLAN .....</b>	<b>95</b>
8.1 (MICRO LEVEL IMPLEMENTATION WILL BE DONE WITH HELP OF PMC).....	95
8.2 KEY CONTROLS AS PART OF THE ACTION PLAN: .....	95
<b>9 ACCIDENT REPORT.....</b>	<b>98</b>
9.1 ACCIDENT REPORT PKG-3A .....	98
9.2 ACCIDENT REPORT PKG-3B .....	98

9.3	ACCIDENT REPORT PKG-8B .....	98
9.4	ACCIDENT REPORT PKG-8C .....	98
<b>10</b>	<b>SITE WORK PROGRESS PHOTOGRAPHS.....</b>	<b>99</b>
10.1	PACKAGE -3A –PHOTOGRAPHS .....	99
10.2	PACKAGE -3B –PHOTOGRAPHS.....	100
10.3	PACKAGE -4A –PHOTOGRAPHS .....	101
10.4	PACKAGE -8A–PHOTOGRAPHS .....	102
10.5	PACKAGE -8B-PHOTOGRAPHS .....	103
10.6	PACKAGE -8C–PHOTOGRAPH.....	104
10.7	RKI 2 ROAD –( CHEMMANAR-GAP ROAD) PHOTOGRAPHS.....	105
10.8	RKI 3 ROAD –( PAINAVU-ASHOKAKAVAL ROAD) PHOTOGRAPHS .....	106
10.9	RKI 4 ROAD –(ADOOR TO CHENGANNUR) PHOTOGRAPHS.....	107
10.10	SCDP ROAD –COMPONENT B –PHOTOGRAPHS.....	108



# 1 Executive Summary

## 1.1 Introduction

The government of Kerala has decided to take up the Phase-II up-gradation component of KSTP as a standalone project vide the "KSTP-II" with assistance from World Bank. The project envisages the up-gradation of 363 km of SH and MDR, Road Safety Management, and Institutional Strengthening of PWD. The total project cost is 445 million USD out of which 216 million USD is loan assistance from the World Bank. The project loan agreement was signed on June 19, 2013, at the DEA Office, New Delhi. The loan effectiveness date is September 6, 2013. The project implementation period was five years, up to 31st December 2018, but now stands extended to April 2021 and the expected loan closing date is 30.04.2021.

## 1.2 Project Development Objectives

The Project Development objective under the initial stage was to improve road conditions, traffic flow, and road safety with a focus on vulnerable road users on Kerala State Core road Networks comprising of about 450.00 Km of major roads and state highways. The main beneficiaries of the Project will be the users living along the Project corridors mainly pedestrians, motorists, agricultural and industrial producers, consumers, and the local community. The main benefits under this implementation would be in the form of reduced transport bottlenecks, lower passenger freight transport costs, reduced travel time, and improved road safety in terms of reducing severe crashes and injury.

## 1.3 Project Components

It was decided jointly by World Bank and KSTP to divide the entire project into the following main components under KSTP-II

### 1.3.1 Road Upgrading Works:

These works named Component A1 and A 2 will include upgrading of about 363 km of strategically important State Highways to complete network connectivity in the state to reduce travel time between key socio-economic centres.

### 1.3.2 Road Safety Management:

This component named Component B & C will support the strengthening of the road safety management systems in Kerala to arrest the increase of crash fatalities in the state. This component will finance various initiatives on capacity building including a **Safe Corridor Demonstration Project**, *implementation of local-level programs utilizing the challenge fund, and advisory support for road safety activities.*

### 1.3.3 Institutional Strengthening

The objective of this component is to improve the sustainability of Kerala's state road network concerning its functional adequacy, financial viability, and capacity of key state road sector institutions to deliver road infrastructure and services that are responsive to road user needs. The major initiatives include the Modernization of the Road Sector and improving Public Communication and User Engagement in Road Development.

### 1.3.4 RKI Flood works

These works named Component D will include upgrading of about 800kms due to rehabilitation of affected road infrastructure in 2018 floods in Kerala under the Rebuild Kerala Initiative, of strategically important State Highways to complete network connectivity in the state to reduce travel time between key socio-economic centres.

## 2 Planning & Overall Implementation

### 2.1 Project Staffing:

KSTP is managed by a Project Director, in the Rank of a senior level Chief Engineer assisted by one Chief Engineer, two Superintending Engineer's, and other engineers and officers. The Technical Wing headed by the Chief Engineer is responsible for activities related to engineering, environment, social, and contract management. Further, the legal contract management cell is headed by a legal professional. KSTP has qualified and experienced Social and Environmental Experts and a Project Consultant. The Finance Wing headed by a Finance Controller (deputed from the Secretariat) has a qualified Finance Manager with support staff. On the field, the KSTP has Two Superintending Engineers, Five Divisions located at Kottarakkara, Muvattupuzha, Kuttippuram, Kannur, Ponkunnam each headed by an Executive Engineer to monitor project progress.

### 2.2 Project co-ordination:

Govt. of Kerala has established two committees to monitor, coordinate, and expedite project activities. The **Project Steering Committee** chaired by the Chief Secretary has its main functions to review and approval of recommendations regarding acceptance of tenders and taking the final decisions on all matters concerning procurement and monitoring of project activities. The members of the committee are Principal Secretary (Finance), Secretaries to Government, PWD, Law Department, Revenue, Chief Engineer, R&B, Project Director, KSTP, Chief Engineer (Projects) KSTP. The second is an **Evaluation Committee** headed by the Principal Secretary PWD and comprising the Project Director, KSTP, and Chief Engineer (Projects), to make recommendations on any issues on procurement as may require the approval of the Steering Committee.

### 2.3 Component A 1 implementation

Under this component, 2 supervision consultancies CSC1 and CSC 2, Independent engineering services, and Transaction Advisory Service for EPC are included. Contract Agreement for Consultancy for CSC 1 for 190 Km of up-gradation road was executed with M/s Egis International in JV with Egis India Consulting Engineers Pvt. Ltd on 28.02.2013 and mobilized and in place. Egis has established a rented office for Team Leader at Thiruvananthapuram near to Client's Office and started functioning from April 2013. Also, the RE office is functioning for Package 3A & 3B at Kuttuparamba in Kannur District for package – III, Thiruvalla Town in Pathanamthitta District for Package 4A & 4B.

### 2.4 Sub Component A2 implementation

Ground Truthing and updation of DPR for this sub-component (Punalur – Ponkunnam – 82 Km under EPC) was carried out by M/s L&T Infrastructure. The bids invited were split into three packages and tender notification issued. Clearance has been received from World Bank for the bid documents. Contract Agreement for Consultancy for CSC for 82.17 Km of up-gradation road was executed with M/s Consulting Engineers Group Ltd on 01.11.2019 and mobilized and in place. Work under this is in progress and a more detailed description of each package is listed further in this document.

### 2.5 Component B – Road Safety Management implementation

Under this component following works were initiated:

1. Strengthening of KRSA is completed
2. Challenge fund proposal was received from Kozhikode DRSC through KRSA
3. Safe Corridor Demonstration Project (SCDP)
4. Implement Five other roads as SCDP on the guidelines of the SCDP road

Activity 1 & 2 are completed while 3 is almost in the completion stage. Out of Five roads, three are taken up for implementation under Challenge Fund. Bids have been received for Road 3 and Road 4 while no Bids received for Road 2.

## 2.6 Component C – Institutional Strengthening implementation.

### 2.6.1 Consultancy Services

The following Consultancy services are completed.

1. Consultancy for Road User Perception Survey has been completed for 363 Km of Project Roads through M/s Sherwood Consultants and report shared with Bank.
2. Consultancy for Prioritization and DPR Preparation for 1000 Km of Improvement of State roads was entrusted with M/s Egis India Consulting Engineers Pvt. Ltd and final report submitted. DPR for the first 439 km of roads has been completed. The preliminary project report for 1106 km was submitted to Government for posing for External Financial Assistance.
3. Consultancy for Strategic Option Study (SOS) for 8570 Km newly declared MDR was completed by M/s CDM Smith Associates Pvt. Ltd. The study report has been handed over to PWD, R&B, and further action to improve these roads will be taken by them using their funds.
4. Consultancy service for Developing Multi-Model Integrated Transport Hub at 3 cities, Trivandrum, Kozhikode, and Kochi was completed and the report forwarded to Government. This report was also shared with NATPAC for consideration while preparing Comprehensive City Development Projects.
5. Preparation of design under the Green Building concept for PWD, Head Quarters Building. This was completed and forwarded to Chief Engineer, Buildings for obtaining AS
6. The Strategic Road Network Program was replaced with the following proposals as per the current priorities of the new Government
  - *Development of KHRI into Centre of Excellence on Road Safety and Asset Management*
  - *Development of Public Information Management System integrating the existing Public Information Cell, the WINGS portal of PWD, the GIS, etc – undertaken by PWD*
  - *Consultancy Services for Project Management of PMT*
  - *Consultancy for Post Construction road audit of works*
  - *Integration of labor laws and compliance in the World Bank-funded Project*
  - *Appointing Probity Advisor in PMT*
7. The Public Information Management System will be developed by the Chief Engineer Road and Bridges, Public Works Department.
8. The Project Management Software has been installed and training given to CSC and KSTP Engineers. The PMS is operationalized.
9. A Community liaison officer was appointed in PMT to assist in the implementation of SCDP.
10. The periodical Road User Satisfaction Survey is arranged and in progress.

## 2.7 Component D – RKI Flood work implementation by KfW& World Bank

After the assessment of flood damages of August 2018, Gok decided to rebuild these damaged roads with the assistance of the World Bank and KfW Bank. Accordingly, a new Component as “**Component D**” was formalized in June 2019 to take up these flood-damaged roads. PWD is now considering developing a more sustainable and climate-resilient asset stock in the medium to long term (especially during the planned rehabilitation of affected road infrastructure in the 2018 floods in Kerala). The Government of Germany pledged to support the Governments of Kerala in its rebuilding efforts with due attention to “building back better” principles, by providing via KfW Loan. Around 700km of roads have been finalized by DPR Consultants. More details are further described in the following chapters elsewhere in this document.

## 2.8 Six Point Action Plan and Action Taken– Implementation

A six-point action plan and governance improvement action plan for strengthening fiduciary arrangements, quality assurance, and contract management was drawn and agreed upon during the Interim Mission held in August 2017. It was then agreed that the plan be fully complied by January 2018. Although late, the action plan has now been fully complied with and continues to comply, as mentioned below

SI. No.	Details of the Action Plan agreed with GoK	Assessment during mission
1	Develop a mutually agreed Governance Improvement Action Plan including Strengthening Fiduciary Arrangements, Quality Assurance and Contract Management by the end of September 2017 and fully comply with the plan by January 2018	Complied. PMC fully mobilized.
2	Ensure continuity of Project Director and key project staff till the end of the project	Complied. PMU staffing, however, needs enhancement in view of an expanded mandate.
3	Engage experienced contract management specialist and quality assurance specialist in the PMT	Complied. Engaged through PMC consultants. M/s Eptisa Servicios Ingeniera S. L appointed on 5 <sup>th</sup> March 2019 for 15 months and functional. However, in the light of the World Bank's closer date being extended, the PMC services has been extended till April 2021.
4	Take final decision on way forward for Component A2	Award of works for Package , 8B and 8C completed in November 2019 Works are in progress in these packages under EPC Mode of Contract. The completion time for these works is 24 months.
5	Ensure full commitment of Component B and at least 80% for Component C	Complied for Component C. For Component B, however, 100% compliance can be achieved after the remaining 10% commitment (Challenge Fund). Technical Bid evaluation stage under process.
6	Sustain the progress in Component A1 and reach overall progress of 100 %	Complied. Current physical progress is 96.06 % and disbursement is 90.08 %.

## 2.9 Quality Assurance:

The KSTP had engaged a Construction Supervision Consultant for quality certification at the primary level. Their functions on quality assurance will be monitored by deepening the involvement of the KSTP Divisional Engineers. At the second level of quality monitoring, KSTP had engaged an Independent Quality Monitoring Consultant. The final quality monitoring including a review of all quality monitoring activities, KSTP has formed a Quality Review Committee chaired by the Chief Engineer KSTP, who is arranging reviews. Further, actions to appoint a Consultant for closure audit of the roads before taking over is in progress.

### **Bill Processing and Variation Management:**

The bills for works certified by the Supervision Consultants are processed through the KSTP field Divisions as envisioned in the Finance Manual. Also, variations approval procedure has been outlined and the approvals are put through this protocol. Further, to improve the cash flow conditions of the contractors to speed up the pace of implementation an Accelerated Payment System was introduced by which 75% of the amount due will be paid as soon as the bill is received at PMT before detailed scrutiny.

### **Project Management Consultant (PMC) and Probity Advisor:**

To augment the capabilities of the existing staff to effectively manage the Project activities, including implementing the Governance Improvement Action Plan, the KSTP had initiated the selection process for the Project Management Consultant. M/s Eptisa finalized and appointed and was on board from 5<sup>th</sup> March 2019.

#### **1. Ensure continuity of Project Director and key Project staff till the end of the Project.**

The State has posted a full-time officer from the Indian Administrative Service as Project Director and the positions of Social, Environmental, and other positions are also filled.

#### **2. Engage experienced Professional in Quality Management and Contract Management Specialists in the PMT and organize monthly management meetings on Quality Assurance and Contract Management**

The Quality Management and Contract Management Specialists are included in the PMC team and were mobilized by the 1st week of March 2019. The quality review committee with Chief Engineer KSTP as Chairperson has been reviewing Quality and Organization meetings regularly in the PMT Head Quarters. An independent Technical Auditor was also appointed to carry out Quality Audit. A Consultant for Post Construction Technical has been selected.

#### **3. Sustain Progress in Component A1 and reach overall progress of 100 %**

By the end of January 2021, the physical progress is 96.06% on Sub Component A1 (Road up gradation in 4 Packages). The financial progress is 90.08 %. The overall disbursement as of January 2021 is 108.57 Million USD which is 90.08 % of the overall loan amount of US\$ 121 million committed in component A1.

#### **4. Sustain Progress in Component A2, including preparation of revised engineering design.**

Due to time constraints to complete the formalities like financial closure and then implement the Project (Punalur – Ponkunnam road) before the loan closure period, the Government of Kerala decided to change the mode of procurement to EPC in Consultation with the Bank. The State has also recommended an extension of the loan period. The bidding documents are prepared by M/s L&T and tenders have been floated which ends April (mid) 2019. Bids have been received for all these packages, evaluation done, and have been awarded in July & August -2019 and mobilized on-site in the month of December-2019. Details of these packages are explained more in detail in the following chapter of the document. Package 8 A is dropped from World Bank and is taken up under State Funding

### **Commitment of Component B and at least 80% for Component C:**

#### **Component B**

Out of US\$ 22 million (Rs. 12 crore) allocated so far, KSTP has arranged works on SCDP, (Road Safety Interventions), the Capacity Building, and the proposals of the Challenge Fund program are under scrutiny. 100 % has been committed and three roads have been tendered after DPR consultants for Challenge Fund submitted their reports in august 2020. Other works such as Trauma Care, Road Safety Enforcement, etc are in advanced stage and in completion stages..

#### **Component – C: Institutional Strengthening**

Under the Road Sector Modernization, KSTP had already arranged a few Consultancy assignments such as Design of Green Building for PWD Head Quarter and others. Further to this, KSTP has initiated procurement for the assignments in consultation with the Bank.

In the Sub Component Active User Engagement in Project Design, implementation, Screening, and Asset Management, the KSTP has arranged the Periodic Road User Satisfaction Surveys, another assignment for Community Participatory Road Safety and User Management Program was dropped as individual experts have been engaged for Community Liaison works.

**Component – D: Flood Control works**

Under this component of US\$ 26 million (out of 216) due to time constraints to complete the formalities like financial closure and then implement the three RKI Roads Package, Project before the loan closure period, the Government of Kerala decided to change the mode of procurement to EPC in Consultation with the Bank. The State has also recommended an extension of the loan period. Bids have been received for all these packages, evaluations done, and have been awarded in January-2020. The works were mobilized on-site in the month of April-2020 except for One package which was awarded in the month of April-2020. Details of these packages are explained more in detail in other chapters of this document.

**2.10 Compliance of legal covenants**

Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
<b>A. Institutional Arrangements</b>		
1.	<p>The Project Implementing Entity shall maintain, throughout the period of implementation of the Project:</p> <p>a. A Project Steering Committee (“the PSC”): (i) headed by Chief Secretary of Kerala, and comprised of representatives of Project Stakeholders and line department of the Government of Kerala, in numbers, manner, and substance acceptable to the Bank</p> <p>b. A Project Management Team (the “KSTP”) within the PWD: (i) headed by a Project Director in the rank of a senior level Chief Engineer and assisted by competent staff</p> <p>c. An Evaluation Committee (“the Evaluation Committee”) within the PWD</p> <p>d. An Environmental and Social Management Cell (the “ESMC”) within the PWD with competent, experienced, and qualified staff in sufficient numbers and under terms of reference satisfactory to the Bank, vested with powers, financial resources, functions, and competencies, acceptable to the Bank. Monitor and evaluate contractors’ an consultants’ compliance therewith, and carry out any necessary updates thereto</p>	<p>a. Steering Committee in place</p> <p>b. Project Management Team in place</p> <p>c. The Evaluation Committee in place</p> <p>d. Environmental and Social Management Cell in place</p>
2.	<p>The Project Implementation Entity shall throughout the period of implementation of the Project the services of a supervision consultant (the “Construction Supervision</p>	<p>- Construction Supervision Consultant in place</p>

Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
	Consultant”), with qualifications and experience and under terms of reference acceptable to the Bank.	
3.	<p>The Project Implementation Entity shall engage:</p> <p>a. by no later than twelve (12) months after the effective date, and thereafter maintain throughout the period of implementation of the Project, the service of an independent engineer (the “Independent Engineer”)</p> <p>b. By no later than six (6) months after the effective date, and thereafter maintain throughout the period of implementation of the Project, the services of a firm of Chartered Accountant with qualification and experience, and under terms of reference, acceptable to the Bank</p>	<p>a. PPP mode converted to EPC Authority Engineer M/s CEG appointed for Package 8 B and 8 C</p> <p>b. Internal Audit firm appointed for audit of accounts</p>
<b>B. Project Document</b>		
	<p>The Project Implementation Entity shall:</p> <p>a. Implement the Project in accordance with the Project Implementation Plan, the FM Manuel, the GAAP, and the Safeguard documents</p>	This is complied
<b>C. Anti-corruption</b>		
	The Project Implementation Entity shall ensure that the Project is carried out in accordance with the provisions of the anti-corruption guidelines and the GAAP	Complied
<b>D. Challenge Fund</b>		
1.	For purposes of carrying out under Component B2 of the Project, the Project Implementing Entity shall, through the coordinated and cooperative effort of the PWD and the RSA, mobilize local stakeholders, including District Road Safety Councils, GramaPanchyats, and/or non-governmental organizations	Complied
<b>E. Safeguards</b>		
1.	<p>The Project Implementing Entity shall:</p> <ul style="list-style-type: none"> <li>Carryout the Project in accordance/ compliance with the Environmental Impact Assessment (“EIAs”), the Environmental Management Plans (“EMPs”), the Environmental Management Framework (“EMF”), the Resettlement Action Plan (“RAP”), and the instruments</li> </ul>	This is complied
3.	The Project Implementing Entity shall ensure that, prior to commencing any civil works on a particular road, or section thereof, under the Project: (i) All necessary	All permits from statutory authorities obtained

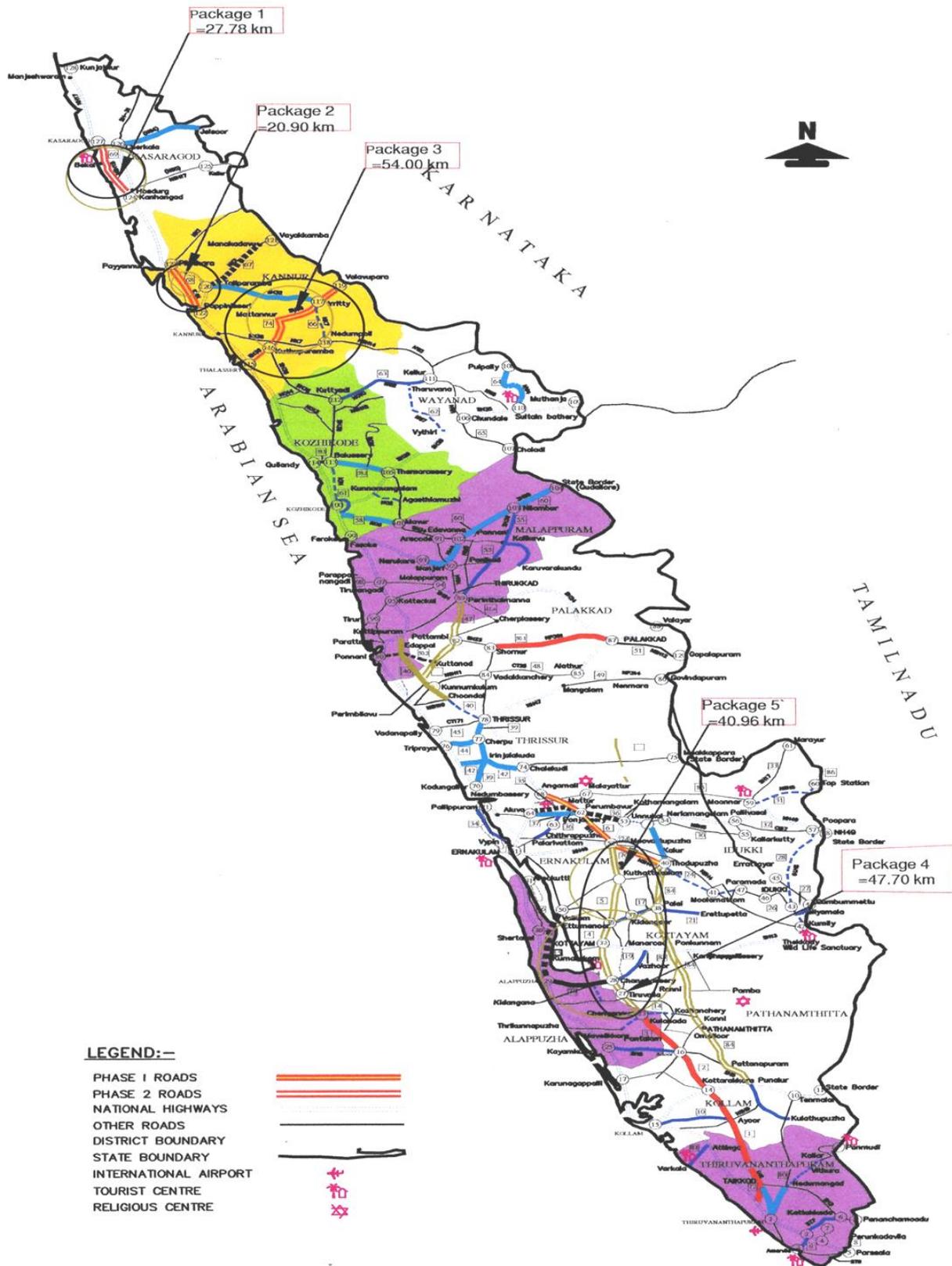
Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
	governmental permits and clearances for such civil work in the relevant road, or section, shall have been obtained from the competent governmental authority/ies and submitted to the Bank	
4.	The Project Implementing Entity shall ensure that each contract for civil works under the Project includes the obligation of the relevant contractor to comply with the relevant Safeguard Document applicable to such civil work commissioned/ awarded pursuant to said contract.	EMP followed during construction
5.	<p>The Project Implementing Entity shall:</p> <ul style="list-style-type: none"> <li>a. Furnish to the Bank, throughout the period of Project implementation : <ul style="list-style-type: none"> <li>i. Quarterly reports prepared by KSTP, with the assistance of the ESMC, on the general compliance with the Safeguard Documents, the Social and Environmental Impact of Project activities, and the results of the mitigation or benefit-enhancing measures applied thereto, during the period preceding the date of each such report</li> <li>ii. Quarterly reports prepared by (A) the Construction Supervision Consultant in respect of Sub-Component A1 of the Project; and (B) the Independent Engineers, in respect of Component A2 of the Project, said reports to assess the respective contractor's general compliance with the Safeguard Documents, the Social and Environmental Impact of Project activities, and the results of the mitigation or benefit-enhancing measures applied thereto, with particular emphasis on the implementation and results of resettlement activities, during the period preceding the date of each such report.</li> </ul> </li> </ul>	Complied with

**F. Suggestion and Complaint Mechanism**

	The Project Implementing Entity shall maintain and operate throughout the period of implementation of Project activities, a district-level grievance redressal mechanism for resettlement and rehabilitation and a State level grievance redressal mechanism for all other aspects of the Project, which systems shall be subject to guidelines and procedure, acceptable to the Bank.	District level GRC of KSTP meetings are held once a month chaired by District Collector. State-level GRC is included in the SLEC chaired by Chief Secretary once a month. The status of GRC is attached to the report under Social Safeguard Management.
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Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
<b>G. Project Surveys</b>		
	The Project Implementing Entity shall carry out at least two (2) Road User Surveys with scope, methodologies, and terms of reference satisfactory to the Bank, to assess road user's satisfaction with Project results and its implementation, their opinions regarding current and potential sector targets, and their behavioral/ attitudinal changes.	Baseline RUSS done and next survey done in 2018 . Final survey requested to be done prior to closure of WB Loan in April 2021.
<b>SECTION II PROJECT MONITORING, REPORTING, AND EVALUATION</b>		
<b>A. Project Reports</b>		
1.	The Project Implementing Entity shall monitor and evaluate the progress of the Project and prepare Project Reports for the Project in accordance with the provisions of Section 5.08(b) of the General Conditions and based on indicators as agreed with the Bank. Each such Project Report shall cover the period of one calendar quarters	The monthly and quarterly Projects Reports are submitted regularly with details
<b>B. Financial Management, Financial Reports, and Audits</b>		
1.	The Project Implementation Entity shall maintain a Financial Management System and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Bank	Complied
2.	The Project Implementing Entity shall prepare and furnish to the Bank, by not later than forty-five (45) days after the end of each calendar quarter, interim financial reports for the Project covering the calendar quarter, inform and substance satisfactory to the Bank	Complied
3.	The Project Implementing Entity shall ensure that the Audited Financial Statements for each period shall be: a. Furnished to the Borrower and the Bank not later than ten (10) months after the end of the period, and	Complied
	b. made publicly available in a timely fashion and a manner acceptable to the Bank.	Document is open to public

### 3 Project Key Map



## 4 Funding & Disbursement

The total disbursement at the end of January 2021 from the World Bank was 132.89 (Including front end fee)  
USD Million

KSTP-II commenced operations in the year 2013 and funding details are as below

Project appraisal	-	April 2013
Loan agreement signed	-	19 June 2013
Loan Effectiveness date	-	Sept 6, 2013
Project Cost approved by the World Bank	-	US\$445 ml
World Bank (IBRD) Loan Assistance	-	US \$ 216 million
Initial Project implementation Start Date	-	July 30 2013
Project implementation End Date	-	31 <sup>st</sup> December 2018
Initial Expected closing date (Loan)	-	30 <sup>th</sup> April 2019
Extended Closing Date (Loan)		30 <sup>th</sup> April 2021
Bank's assistance	-	56% of eligible expenditure except land acquisition, utility shifting, and administrative cost. State share is 44%. For EPC World Bank Share component is 100 %.

### 4.1 Current Disbursement Status

SI No	Claim	Date	EXPENDITURE in Lakh	AMOUNT CLAIMED in Lakh	DISBURSED	BALANCED FUNDS AVAILABL E FOR CLAIM (USD)
					USD in millions	
					TOTAL	TOTAL
						216.00
	Front end fee				0.54	215.46
1	Retroactive	15.06.12 to 15.06.13	1,863.95	1,043.00	1.69	213.77
2	1 <sup>st</sup> Quarter					213.77
3	2 <sup>nd</sup> Quarter	01.07.13 to 30.9.13	1,355.79	764.00	1.23	212.54
4	3 <sup>rd</sup> quarter	01.10.13 to 31.12.13	1,906.01	1,071.00	1.71	210.82
5	4 <sup>th</sup> quarter	01.01.14 to 20.03.14	2,696.00	1,510.00	2.50	208.32

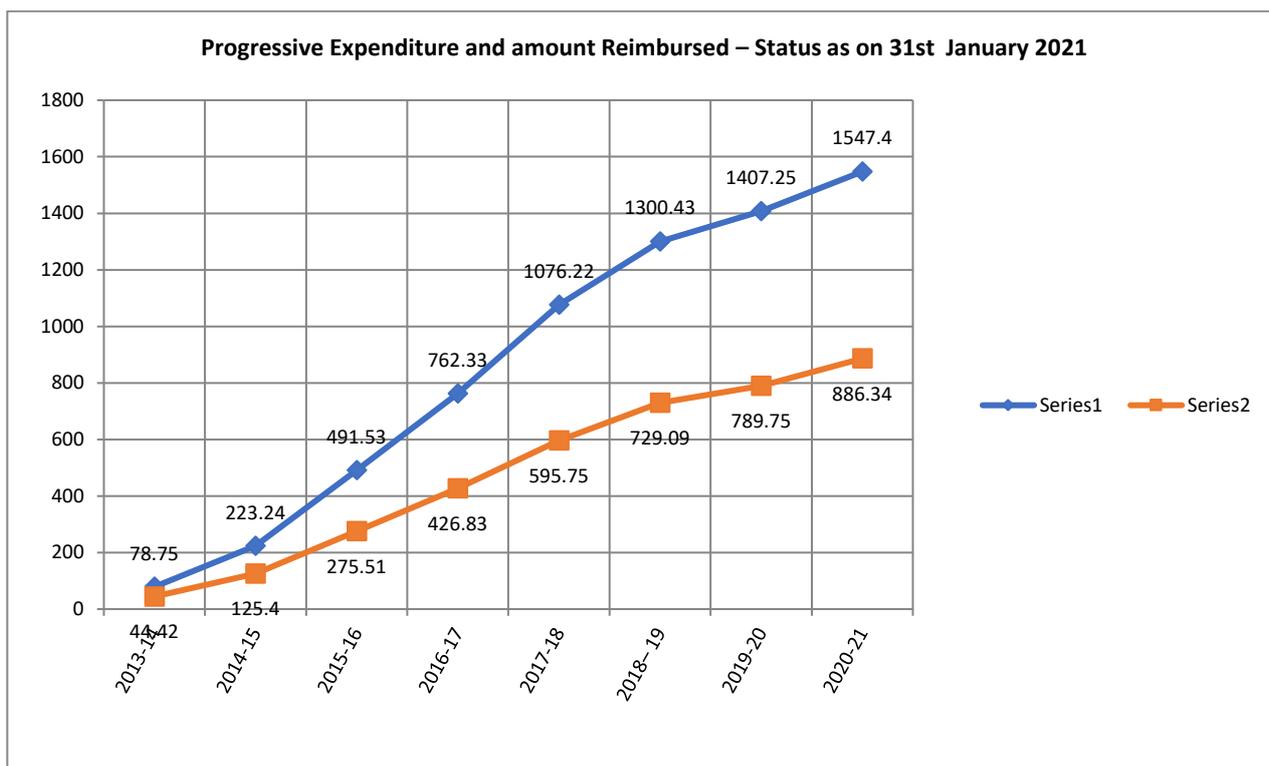
SI No		Date	EXPENDITURE in Lakh	AMOUNT CLAIMED in Lakh	DISBURSED	BALANCED FUNDS AVAILABLE FOR CLAIM (MUSD)
6		21.03.14 to 31.03.14	53.79	30.00	USD in millions	208.27
7	1 <sup>st</sup> Quarter	01.04.14 to 18.06.14	<b>TOTAL</b>	<b>TOTAL</b>	<b>TOTAL</b>	<b>TOTAL</b>
8		19.06.14 to 30.06.14	14.69	8.00	0.02	206.55
9	2 <sup>nd</sup> Quarter	01.07.14 to 30.09.14	1,405.61	787.00	1.27	205.28
10	3 <sup>rd</sup> quarter	01.10.14 to 31.12.14	3,790.21	2,124.00	3.44	201.84
11	4 <sup>th</sup> quarter	01.01.15 to 28.02.15	3,706.35	2,076.00	3.32	198.52
12	4 <sup>th</sup> quarter	01.03.15 to 31.03.15	3,704.89	2,076.00	3.32	195.20
13	1 <sup>st</sup> Quarter	01.04.15 to 16.06.15	3,534.14	1,992.00	3.14	192.06
14		17.06.15 to 30.06.15	154.40	86.00	0.14	191.92
15	2 <sup>nd</sup> Quarter	01.07.15 to 30.09.15	3,527.06	1,977.00	3.04	188.89
16	3 <sup>rd</sup> quarter	01.10.15 to 31.12.15	10,338.17	5,790.00	8.51	180.38
17	4 <sup>th</sup> quarter	01.01.16 to 13.03.16	6,413.18	3,592.00	5.38	175.00
18		14.03.16 to 31.03.16	2,861.91	1,603.00	2.41	172.59
19	1 <sup>st</sup> Quarter	01.04.16 to 10.06.16	2,037.40	1,141.00	1.69	170.90
20		11.06.16 to 22.06.16	2,957.89	1,657.00	2.45	168.45
21	2 <sup>nd</sup> Quarter	23.06.16 to 31.08.16	4,786.10	2,680.00	4.01	164.44
22		01.09.16 to 30.09.16	3,981.82	2,230.00	3.26	161.18
23	3 <sup>rd</sup> quarter	01.10.16 to 31.12.16	4,079.22	2,284.00	3.40	157.78
24	4 <sup>th</sup> quarter	01.01.17 to 31.03.17	9,237.79	5,173.00	8.04	149.74
25	1 <sup>st</sup> Quarter	01.04.17 to 31.05.17	4,292.74	2,404.00	3.72	146.02

SI No		Date	EXPENDITURE in Lakh	AMOUNT CLAIMED in Lakh	DISBURSED	BALANCED FUNDS AVAILABLE FOR CLAIM (MUSD)
26		01.06.17 to 30.06.17	3,933.36	2,203.00	USD in millions	142.58
27	2 <sup>nd</sup> Quarter	01.07.17 to 30.09.17	<b>TOTAL</b>	<b>TOTAL</b>	<b>TOTAL</b>	<b>TOTAL</b>
28	3 <sup>rd</sup> quarter	01.10.17 to 31.12.17	5,319.40	2,987.00	4.69	132.79
29	4 <sup>th</sup> quarter	01.01.18 to 28.02.18	6,770.27	3,791.00	5.82	126.97
30		01.03.18 to 22.03.18	3,935.30	2,204.00	3.39	123.58
31		23.03.18 to 31.03.18	1,241.57	695.00	1.04	122.54
32	1 <sup>st</sup> Quarter	01.04.18 to 31.05.18	1,925.29	1,086.00	1.61	120.93
33		01.06.18 to 20.06.18	1,114.33	627.00	2.02	118.91
34		21.06.18 to 22.06.18	1,344.42	753.00		118.91
35		23.06.18 to 30.06.18	89.25	50.00	0.07	118.84
36	2 <sup>nd</sup> Quarter	01.07.18 to 18.09.18	7,104.38	3,982.00	5.49	113.35
37	3 <sup>rd</sup> quarter	19.09.18 to 31.12.18	5,817.34	3,258.00	4.59	108.76
38	4 <sup>th</sup> quarter	01.01.19 to 28.02.19	3,075.19	1,722.11	2.49	106.27
39		01.03.19 to 31.03.19	1,950.03	1,127.00	1.63	104.64
40	1 <sup>st</sup> Quarter	01.04.19 to 30.04.19	2,420.03	1,355.22	1.93	102.71
41		01.05.19 to 20.06.19	1,522.48	853.00	1.23	101.48
42		21.06.19 to 27.06.19	2,247.92	1,303.00	1.89	99.59
43	2 <sup>nd</sup> Quarter	28.06.19 to 30.09.19	2,961.19	1,689.00	2.35	97.24
44		01.10.19 to 31.12.19	1530.80	865.00	1.22	96.01
45	3 <sup>rd</sup> Quarter	01.12.19 to 31.12.19	1513.75	875.00	1.23	94.79
46	4 <sup>th</sup> Quarter	01.01.20 to 31.03.20	5038.19	3086.00	4.07	90.72
47	1 <sup>st</sup> Quarter	01.04.20 to 24.06.20	3805.99-	2703.00	3.58	87.14
48	2 <sup>nd</sup> Quarter	25.06.20 to 30.09.20	3656.03	2995.00	4.03	83.11
49	3 <sup>rd</sup> Quarter	30.09.20 to 31.12.20*				83.11*
			<b>154,739.55</b>	<b>88,633.56</b>	<b>132.35*</b>	

\*excluding front end fee

## 4.2 Progressive Expenditure and amount Reimbursed – Status as of 31 January- 2021

Year	Cumulative Expenditure (INR Crores)	Progressive Amount Reimbursed (INR Crores)
2013-14	78.76	44.18
2014-15	223.24	125.12
2015-16	491.53	275.52
2016-17	805.26	451.21
2017-18	1076.23	603.04
2018-19	1300.43	729.09
2019-20	1407.25	789.75
2020-21	1547.40	886.34



### Estimated Actual loan allocation and disbursement received (Bank's Financial Year (July to June) (US\$ million)

Fiscal Year	2014	2015	2016	2017	2018	2019	2020	2021
	July 2013- June 2014	July 2014- June 2015	July 2015- June 2016	July 2016- June 2017	July 2017- June 2018	July 2018- June 2019	July 2019- June 2020	July 2020- June 2021
Annual	22	43	45	54	32	20		
Cumulative	22	65	110	164	196	216		
Actual	8.92	14.62	23.48	25.86	23.75	19.25	12.44	4.03*
Cumulative	8.92	23.54	47.02	72.88	96.63	115.88	128.32	132.35*

\*excluding front end fee

### 4.3 RESTRUCTURING OF LOAN IN 2019

Through their letter dated May 11, 2018, the Department of Economic Affairs, Ministry of Finance, and Government of India had submitted a request for restructuring of the loan. Considering the floods and damages witnessed by the state in August 2018, through their letter dated November 15, 2018, the Department of Economic Affairs submitted a revised request for utilizing the savings (USD 45 million) from KSTP II Loan for rebuilding the Kerala initiative. **A new Component “D” was introduced**, the funds of which were to be utilized for PWD /LSGD and RKI roads. Under this component, roads affected during the floods of Aug 2018 identified by PWD and further prioritized by Transaction Advisors M/s LNTIEL, based on World Bank suggestions shall be taken up for DPR preparation. The details are more fully described in this report in the chapter's forthcoming in this report.

However, Gok decided to remove LSGI roads under this and instructed that this be used by KSTP only. Hence 19 Million USD is added in Component A 2 taking that to a total of 33 M USD + 19 M USD = 52 M USD under RKI roads of PWD, the funds of 23 M USD + 3 M USD = 26.0 M USD for Component D is proposed.

<b>Component</b>	<b>Original Loan Allocation (Million USD)</b>	<b>Revised Loan Allocation (Million USD)</b>	<b>Completed Loan in (Million USD) till January 2021</b>
<i>Component A1: Road Network Upgrading and Safety Improvement (282 Kms Upgrading)</i>	166	116	108.57*
<i>Component A2: Road upgrading and safety Improvement (EPC) (82.04 Kms)</i>	33	37	6.49*
<i>Component B: Road Safety Management</i>	12	12	8.97*
<i>Component C: Institutional Strengthening</i>	5	5	6.18*
<i>Component D: RKI Roads</i>		26	2.14*
<i>Total</i>	<b>216.0</b>	<b>196.0**</b>	<b>132.35*</b>

Note :\*\* It has been decided to limit the funding to 196.0 M USD currently.

## 5 Current Project Status

### 5.1 Component A1:

The upgrading works under the initial stage hereinafter referred to as **Component A1** for seven road packages were identified and taken up under the KSTP-II. The major items of works included were an improvement to a gradient, widening, and strengthening the roads including minor realignments wherever essential, reconstruction of narrow bridges and culverts, and improvements to the drainage system. The carriageway proposed are generally 2 lane roads with a width of 7.0 m and hard shoulders of 1.50 m. on either side. The Right ofWay is generally 15.0 Meters and required acquisitions at some locations. The specification adopted for civil works is as per MORTH-Rev 5 & IRC standards. All these seven packages were tendered under World Bank Procurement guidelines and as Item Rate Contracts. The details of these roads are summarized in table 1. The land acquisition for the project roads is almost completed except in the Perimbilavu- Pattambi- Perinthalamanna Road. Package 3 was further split into two packages and accordingly Package 3A and 3B were tendered. Two additional stretches of Thiruvalla Town and Bypass were taken up as Package 4A and 4 B.

Hence Overall 10 Packages as shown in table 3 covering a total length of **285.01** km were to be done under Component A 1. Out of these, 283.60 km of Blacktop completed, and also Packages 1, 2, 4, 5, 6, 7 & 4B are completed while Packages 3A, 3B & 4A are in progress. Packages 1, 2 & 4 B are in the “defect liability period” with ongoing pending works under road furniture items, snag list, and additional junction improvement work. These works were undertaken as there were savings in the estimated tendered cost.

**Table 3**

List of Roads Under Component A 1 (Item Rate Contracts)			
Sl. No	Package No	Stretch of the Project State Highway / Road Number	Proposed Length (Km.)
1	KSTP-2/UG/1	Kasargod-kanhangad-SH-57	27.78
2	KSTP-2/UG/2	Pilathara-Pappinssery-SH-67	20.90
3	KSTP-2/UG/3A	Thalassery-Kalaroad-SH-30	28.80
4	KSTP-2/UG/3B	Kalaroad-Valavupara-SH-30	25.20
5	KSTP-2/UG/4	Chennaganoor-Ettamanoor- SH-1	47.70
6	KSTP-2/UG/4A	Thiruvalla bypass (rearranged from Package 4)	2.30
7	KSTP-2/UG/4B	Thiruvalla town (rearranged from Package 4)	2.00
8	KSTP-2/UG/5	Ettamanoor-Muvattupuzha	40.96
9	KSTP-2/UG/6	Ponkunnam-Thodupuzha	50.00
10	KSTP-2/OL/7	Perimpilavu-Perintalamanna	39.37
Total Length under this Component in Km is			<b>285.01</b>

All the works are being executed under FIDIC (5th edition) Conditions of Contract. The work involves improvement of State Highways including geometrical improvements and realignments to standard 2 lanes of 7 m carriageway and 1.5 m paved shoulders. The Construction Works include:

- Widening the existing pavement where it is less than design width;
- Scarification, clearance, earthworks,
- Granular sub-base, wet mix macadam base course, bituminous mix surfacing,

- Construction of overlays to the existing pavement, inclusive of regarding to a designed vertical profile;
- Geometrical realignments at specific locations;
- Construction of paved shoulders;
- Construction and maintenance of diversion roads
- Construction of lined and unlined longitudinal drains covered drains and footpaths in urban areas;
- New culverts, new bridges, and rehabilitation of existing bridges/culverts and protective works
- Provision of road signs and markings;
- Provision of traffic safety features - road furniture and other road safety appurtenances,
- Routine maintenance and maintenance during the Defects Rectification Period.
- Environmental protection measures and Social enhancement works/ landscaping works etc.

**5.2 Details of the Supervision Consultants for the Packages under this component is as below**

Name of consultant	Contract signed	Contract Period	Commence ment Date	Contract Amount (Rs.) revised amount as per Variation 4	Work Package
CSC-1 – M/s Egis International in JV with M/s Egis India Pvt. Ltd.	28.02.2013	42 months	04.04.2013	56,24,10,204 /-	I , II , III A , III B , IV , IV A, & IV B
CSC-2 – M/s MSV International USA	-----	30 months	05.05.2014	4,67,41,766 /-	Package VI

Package VII was completed under KSTP and supervision monitoring was done by Divisional Office PWD SE.

M/s Egis International in JV with M/s Egis India Pvt. Ltd has been given an Extension of time up to 30-04-2021 to facilitate the completion of works under Component A 1, for Package IV A Thiruvalla Bypass as on date.

**5.3 SUMMARY AND STATUS OF THE WORKS UNDER COMPONENT A 1, A 2, B, C & D**

Project Details of KSTP-2 under Sub Component A 1 Date: (31.01.2021)															
Package No	Stretch of the Project State Highway / Road Number	Contractor's Name	Supervision Consultant	EOT Date	EOT-2 (Date)	EOT-3 (Date)	Extended Completion date (Latest)	DLP	Awarded Cost of the Project (Cr.)	Value upto IPC submitted /Final Payment done as on date in Crores	Additional Works	Saving / Overbudget/ Running Bills	Status of the project	Remarks	Remarks / Reasons
KSTP-2/UG/1	Kasargod-kanhangad-SH-57	M/s.RDS Projects Limited	EGIS India	28.02.2018			31-07-2020	31-07-2021	133.05	122.86	6.15	4.04	Completed	Section 1 : 0+000 to 23+180 & 23+350 to 27+780 (TOC 01-04-2018)	Additional work is in progress in DLP period of Bakal road
														Section 2 :23+180 to 23+350 (01-07-2018)	
KSTP-2/UG/2	Pilathara-Pappinssery-SH-67	M/s.RDS Projects Limited	EGIS India	31.03.2018			31-07-2020	31-07-2021	118.29	102.60		15.69	Completed	Section 1 : Except Ramapuram bridge and Thavam ROB (01-04-2018)	Additional work is in progress in DLP period of Oxbow land & Ramapuram bridge
														Section 2 :Ramapuram Bridge and Thavam ROB (01-09-2018)	
KSTP-2/UG/3A	Thalassery-Kalaroad-SH-30	M/s.Dinesh chandra R.Agarwal Pvt.Ltd.,	EGIS India		31.03.2019	31.10.2020	31-03-2020	31-03-2021	156.33	111.58		44.75	Physical progress : 79.98 % Financial progress : 73.84%	Section 1 : Road works other than Eranholi Bridge	IPC-25 has been Certified by Employer,EOT 06 has been approved by Employer
														Section 2 :Eranholi Bridge Work	
KSTP-2/UG/3B	Kalaroad-Valavupara-SH-30	M/s.GHV-EKK Infrastructure & Co.	EGIS India	31.01.2019	15.05.2019		31-12-2020	31-12-2021	209.68	195.25	5.06	9.37	Physical progress :94.32% Financial progress : 89.53%	Section 1 : Except Iritty Bridge and Kootupuzha Bridge	IPC-38 has been Certified by Employer & Iritty Bridge upto 31-12-2020
				31.01.2019	30.09.2019		30-04-2021								
KSTP-2/UG/4	Chennaganoor-Ettamanoor-SH-1	M/s Delma Sreedhanya Jv.	EGIS India	31.03.2018			31-03-2018	31-03-2019	293.58	278.18		15.40	Completed	TOC issued 01.04.2018	
KSTP-2/UG/4A	Thiruvalla by pass (rearranged from Package 4)	M/s.GHV India Pvt Ltd	EGIS India	NIL	NIL		31-12-2020	31-12-2021	37.03	16.99		20.04	Physical progress : 87.33% Financial progress :71.02%	EOT Proposed	EOT -02 has been approved till 31-12-2020,Contractor has been applied for EOT-4 upto 31-01-2021
KSTP-2/UG/4B	Thiruvalla town (rearranged from Package 4)	M/s.EKK Infrastructure Ltd.,	EGIS India	NIL	NIL	15-12-2019	15-06-2020	15-06-2021	7.77	4.83	0.93	2.94	Physical progress : 99.0 % Financial progress : 63.06 %	EOT Proposed	Certificate of Completion has been issued on 29 <sup>th</sup> May 2020.
KSTP-2/UG/5	Ettamanoor-Muvattupuzha	M/s.NAPC Ltd.,	EGIS India	25.02.2018			25-02-2018	25-02-2019	171.49	163.68		7.81	Completed	Performance certificate issued Section 1 : 06.02.2019 Section 2 :25.02.2019	
KSTP-2/UG/6	Ponkunnam-Thodupuzha	M/s.GHV-EKK Infrastructure & Co.	M/s MSV International USA	28.03.2017			28-03-2017	28-03-2018	227.13	223.25		3.88	Completed		
KSTP-2/OL/7	Perimpilavu-Perintalamanna	M/s Nath constructions	Under KSTP				02-03-2017	02-03-2018	8.11	8.11		0.00	Completed		
Total Length under this Component in Km is									1362.46	1227.33		123.92			

Project Details of KSTP-2 under Sub Component A 2																		
Sl.No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultant	Length (Km.)	Estimated Cost	Original completion Date	Appointed date	Revised Appointed date	Awarded Cost of the Project (Cr.)	Actual Unt Cost /km in Crores	Value up to IPC submitted /Final Payment done as on date in Crores	Saving / Overbudget/ Running Bills	Status of the project	TOC /Completion certificate issued	Remarks / Reasons	Variation Order/ Supplementary Agreement Status
1	KSTP-2/OL/8A	Punalur-Konni	Engineering Procurement Construction (EPC)	M/S. RDS & Cherian Varkey	M/s Consulting Engineering Services	29.84	226.61	16-12-2022	17-12-2020		221.04	7.41			Agreement executed on 27/10/2020, Appointed date is 17.12.2020	Mobilization work & preliminary activities in progress		
2	KSTP-2/OL/8B	Konni - Placherry	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s Consulting Engineering Services	30.16	274.74	29-10-2021	06-09-2019	01-11-2019	279.00	13.85	27.95		Physical progress : 35.10 % Financial progress : 20.00 %	IPC-1 & IPC -2 Released	RA-MA-3 (3rd mob. Advance) & IPC-3 - Pending with Authority	

3	KSTP-2/OL/8C	Placherry - Ponkunnam	Engineering Procurement Construction (EPC)	J V of M/s Sreedhanya and Nath Constructions	M/s Consulting Engineering Services	22.17	236.79	21-12-2021	9-10-2019	23-12-2019	248.5	12.43	58.52	Physical progress : 54.50 % Financial progress : 42.08 %	Mobilization advance taken, IPC-01 Released	IPC-02 - Pending with Authority
						82.17	738.14				748.54		72.47			

Safe Corridor Demonstration Project (Under Component B & C)																			
Sl. No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultant	Length (Km.)	Original Completion date	EOT	DLP		Awarded Cost of the Project (Cr.)	Revised cost of the Project (Cr)	IPC Payment in Cr	Saving / Overbudget/ Running Bills /Balance	Status of the project	Completion certificate issued	Remarks / Reasons		
									Completion date	Duration from Completion date									
4	KSTP-2/OL/8	Kazhakuttom-Adoor	Item Rate BOQ	M/s.GHV-EKK Infrastructure & Co.	under KSTP (AEE/AE/EE)	78.65	27.04.2018	31.12.2019	30.09.2020		146.67	137.82	124.43	22.24	Physical progress :91.92 % Financial progress : 84.83 %	Contactor doing work with LD imposition	SCDP project under Component of B & C	IPC-29 Submitted	
Overall Length inKm						445.83													

Challenge Fund of KSTP																						
Sl. No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	DPR Consultant	Length (Km.)	Date of Commencement	Completion date	DLP		Estimated Cost of the Project (Cr.)	Awarded Cost in Lakhs	Revised Cost of the Project (Cr)	Status of the project	Completion certificate issued	Remarks / Reasons						
									Completion date	Duration from Completion date												
1	KSTP-II/CF-1	Pavangad-Korapuzha	Item Rate Contract	M/sEGISIndia PvtLtd	Under procurement stage	5.5					10.02		5.65	Retendered on 22.01.2021		The other 2 Roads are in PWD priority						
2	KSTP-II/CF-2	Medical College-Kannamoola-Pallimukku-Pettah				3.8					7.5		4.50									
3	KSTP-II/CF-3	Kottiyam-Kundara Road				11.7					4		16.30									
4	KSTP-II/CF-4	Vypin-Munambam				25.18					5		30.50									
5	KSTP-II/CF-5	Thrissur-Kunnamkulam State Highway				25.82					10		39.09									
Overall Length inKm						71.18												36.52	96.04			

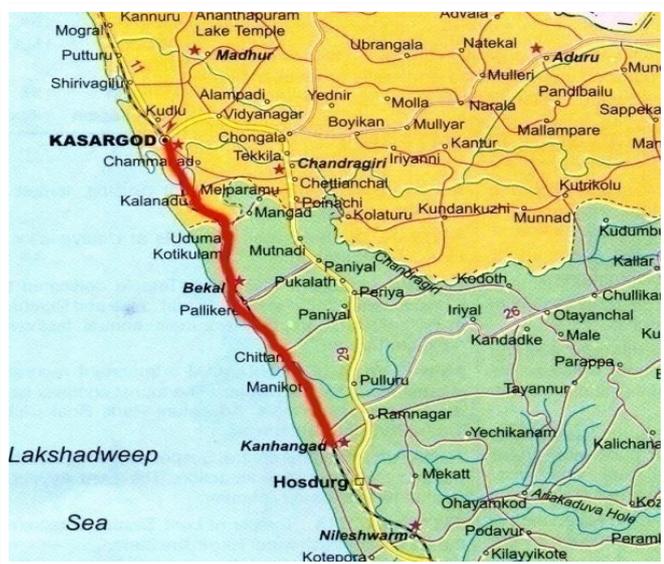
Component D (RKI Roads Flood control)																							
Sl. No	PackageNo/Type	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultant	Length (Km.)	Estimated Cost	Original completion Date	Appointed date	Duration of the Project	Awarded Cost of the Project (Cr.)	Actual Unit Cost /km in Crores	Value up to IPC submitted /Final Payment done as on date in Crores	Saving / Overbudget / Running Bills	Status of the project	Remarks / Reasons	Variation Order / Supplementary Agreement Status						
1	KSTP-2/PMT/RKI 2	Chemmannar Gap road Km.0/00to31/500(except km.10.650)	Engineering Procurement Construction (EPC)	M/s DRAIPL – GREENWORTH (JV)	M/s Consulting Engineering Services	29.94	127.55	17-08-2021	18.08.2020	12 Months	146.67	4.90	2.93	143.74	Physical progress is 1.05% & Financial Progress is 1.90 %	RA-MA-1 (1st mob. Advance) Payment received, SPS -01 pending with authority							
2	KSTP-2/PMT/RKI 3	Painavu-Thannikandom	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s Consulting Engineering Services	21.00	86.82	29.04.2021	30.04.2020	12 Months	95.40	4.54	1.91	93.49	Physical progress is 11.13 % & Financial Progress is 1.90 %	RA-MA-1 (1st mob. Advance) Payment received,SPS-01 pending with authority							
3	KSTP-2/PMT/RKI 4	Adoor- Chenganoor	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s Consulting Engineering Services	23.8	93.59	29.03.2021	30.03.2020	12 Months	98.1	4.12	7.50	93.20	Physical progress is 33.07 % & Financial Progress is 7.68 %	RA-MA-2 (2nd mob. Advance) payment received,IPC-01 & 2 Pending with Authority							
Overall Length inKm						74.74	301.39												193.5	12.38	327.79		

Details below as per MPR submitted by EGIS ( January 2021)

## 5.4 Packages under Component A1 Status

### 5.4.1 Kasargod to Kanhangad Road –SH-57

This stretch of Length - 27.76 km. Covers Kasargod, Pallikkara, Manikoth, and Kanhangad areas and Tourist destinations at Bakel Fort and Ezhimala come under this stretch.



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Upto Jan -2021)	Financial Progress in % (Upto Jan - 2021)
M/s RDS Projects Pvt Ltd	23-04-2015	133.05	99 %	99%
EOT Date	DLP completion date	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till the end of Jan -2021 in Crores
28-02-2018	27-02-2019	21.66	121.99	122.86

The Taking-Over Certificate issued for Sections:

- Except for Kanhangad town w. e. f 01<sup>st</sup> April 2018
- For Kanhangad town w.e.f 01<sup>st</sup> July 2018
- Performance Certificate has been issued on 25.02.2020

Work as per the Snag list has been completed. However, since the as-built drawings, PAP works & additional works proposed have not been completed, the Defect Liability Period has been extended.

#### SUMMARY OF PROJECT COST

Initial Contract Value (Rs.)	-	1,33,05,79,485/-
Contract value of works executed (Rs.)	-	92,86,10,752/-
Value of works as per VOs (Rs.)	-	21,66,82,406/-
Price adjustment as finalized (Rs.)	-	2,57,41,802/-



- For Ramapuram Bridge and Thavam ROB w.e.f 01<sup>st</sup> September 2018

Since the work as per Snag List has not been completed, the Defect Liability Period has been extended for Section – 1.

### Summary of Project Cost

Initial Contract Value (Rs.)	-	1,18,29,77,833/-
Contract value of works executed (Rs.)	-	82,36,71,794/-
Value of works as per VOs (Rs.)	-	15,96,32,324/-
Price adjustment as finalized (Rs.)	-	22,68,74,96/-
Additional Works proposed	-	1,56,78,061/-
Total Value including Price Adjustment	-	98,33,04,118/-
Saving in Project Cost	-	Rs. 19,96,73,715/-

### Construction Activities

During DLP, instructions were issued by KSTP to carry out certain additional works. Supplementary Agreement executed to carry out these additional works like reconstruction of Old Ramapuram Bridge Approach and development of Oxbow land at Ramapuram as proposed by the MLA. Later, certain further modifications suggested by MLA and accordingly Contractor submitted the revised design and Cost Estimate. Supplementary Agreement for this modification to be executed. Employer has awarded extension of time for completion for Oxbow land development and for construction of Approaches to old Ramapuram bridge upto 31.10.2020.

Oxbow land development has been completed and the Inaguration was done on 05th November 2020.

Old Ramapuram Bridge approach works are in completion stage and pavement works only remaining.

PROJECT	Upgradation of the Road from Pilathara (Km 0+000) to Pappinissery (Km 20+900) of SH-67				
CLIENT	Project Director Kerala State Transport Project Phase II				
CONSULTANT	M/s Egis Interntional SA IN JV with Egis India Consulting Engineers Pvt Ltd				
CONTRACTOR	M/s RDS Project Ltd				
Proposed cellular type Approach at Ramapuram Old River Bridge ( 4+260)					
STAUTS OF WORK AS on 31.01.2021					
Item	Cost of Works	%	Works completed	% Completion	Remakrs
Foundation	45,80,395	43%	54,67,843	51%	
Substructure	26,00,481	24%	22,27,890	20.8%	
Superstructure	26,87,716	25%	30,38,330	28%	
Highways	8,64,269	8%	7,71,219	7%	
Total	1,07,32,861	100%	1,15,05,282	107%	
Physical Progress					
Pile completed	14		14	100%	
Pile Cap Completed	7		7	100%	
Wall Completd	11		11	100%	
Slab	2		2	100%	
				100%	
A1 SIDE					
SI No		Completed	In progress	Dia	Remarks
1	P1	1		0.75	Completed
2	P2	1		0.75	Completed

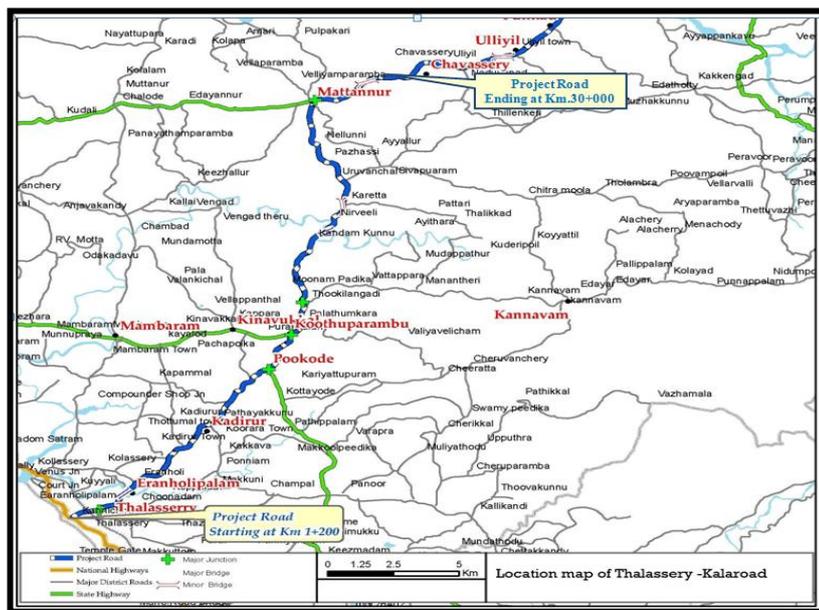
3	P3	1		0.75	Completed
4	P4	1		0.75	Completed
5	P5	1		0.75	Completed
6	P6	1		0.75	Completed
A2 SIDE					
7	P7	1		0.75	Completed
8	P8	1		0.75	Completed
9	P9	1		0.75	Completed
10	P10	1		0.75	Completed
11	P11	1		0.75	Completed
12	P12	1		0.75	Completed
13	P13	1		0.75	Completed
14	P14	1		0.75	Completed
TOTAL	14	14	0		
PILE CAP					
A1 SIDE		Completed	In progress		
P1-P2	1	1			Completed
P3-P4	1	1			Completed
P5-P6	1	1			Completed
A2 SIDE					
P7-P8	1	1			Completed
P9-P10	1	1			Completed
P11-P12	1	1			Completed
P13-P14	1	1			Completed
	7	7			
TIE BEAM					
A1 SIDE		Completed	In progress		
P1-P3,P2-P4,P4-P5 & P5 -P6	4	4			Completed
A2 SIDE					
P7-P9,P8-P10,P9-P11P,10-P12, P11-P13 &P12-P14	6	6			Completed
	10	10			
WALL					
A1 SIDE		Completed	In progress		
W1, W2, W3	3	3			Completed
Side protection wall LHS & RHS	2	2			Completed
A2 SIDE					
W4, W5,W6,& W7	4	4			Completed
Side protection wall LHS & RHS	2	2			Completed

	11	11			
TOP SLAB		Completed	In progress		
A1 Side	1	1			Completed
A2 Side	1	1			Completed
	2	2			
CRASH BARRIER		Completed	In progress		
A1 Side	24 mtr	12	12		LHS & RHS
A2 Side	36 mtr				LHS & RHS
	0	12	12		
Backfillign behind abutments		Completed	In progress		
A1 Side	1	1			Completed
A2 Side	1	1			Completed
	2	2			
Aproach / cantiliver slab		Completed	In progress		
A1 Side	1	1			Completed
A2 Side	1	1			Completed
	2	2			
Aproach Road works	Subgrade				
A1 Side	1	1			
A2 Side	1	1			
	2	2			
Aproach Road works	GSB	Completed	In progress		
A1 Side	1		1		
A2 Side	1	1			
	2	1	1		

**Key Issues (Jan- 2021)**

- Contract for Rehabilitation of existing Bridges at Pazhayangadi on PP road through E-tendering has been awarded to M/s PADMAJA SPECIALITIES, Kochi and Agreement executed.
- Rehabilitation Works pertaining Pazhayangadi Bridge including the works as per VO are in progress.
- Extension of Time approved is till 31 July 2020 with the imposition of Liquidated damages.

### 5.6 Package 3A– Thalassery to Kalaroad -SH-30



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Up to Jan -2021)	Financial Progress in % (Upto Jan-2021)
<b>M/s.DineshChandra R Agrawal Pvt.Ltd</b>	26-06-2018	156.33	79.98	73.837
<b>EOT-03 (For Road Work &amp; Eranholi Bridge - Approved)</b>	<b>EOT-04 (Approved)</b>	<b>Variation Order Value in crores (VO-01 to VO-09)</b>	<b>Anticipated Revised Project Cost</b>	<b>Billed Amount made till the end of Jan-2021 (Net Amount)</b>
31 <sup>st</sup> October-2019 31 <sup>st</sup> Dec-2019	31 <sup>st</sup> March -2020	19.96 Cr	152.29	111.58

The Contract for the Upgradation of Road from Thalassery (Km.1+200) to Kalarode (Km.30+000) has been awarded to M/s Dinesh Chandra R Agrawal Infracon (P) Ltd. The date of commencement of the Project was 27<sup>th</sup> June 2016 and the stipulated time of completion for completion of Milestone-I was 26<sup>th</sup> September 2017 and for Milestone-II was 26<sup>th</sup> June 2018. However, EOT-01 to EOT-05 has been granted by the Employer.

- EOT-01 - Milestone-I merging with Milestone-II Completion date of 26<sup>th</sup> June 2018
- EOT-02 - Completion of Whole of Works by 31<sup>st</sup> March 2019
- EOT-03 - a. Eranholi Bridge Approaches and Service Road and whole project road from Km 1+200 to Km 30+000 by 31<sup>st</sup> October 2019  
b. Commissioning of Eranholi Bridge -31<sup>st</sup> December 2019
- EOT-04 - Completion of Whole of Works by 31<sup>st</sup> March 2020
- EOT-05 - Extension of Time for whole project including Eranholi Bridge and approaches up to 30.10.2020
- EOT-06 - Contractor has submitted application for completion of Road works till 31st January 2021 and time for completion of Eranholi bridge till 31st March 2021

### Work Progress

Cumulative Physical progress achieved is 79.98%.

SI No.	Item	MonthlyProgress	Cumulative Progress	Balance Work
<b>Main Carriageway</b>				
1.	Exc up to SG	-	28.155 Km	0.645 Km
2.	GSB	-	28.150 Km	0.650 Km
3.	WMM	-	28.140 Km	0.660 Km
4.	DBM	-	28.140 Km	0.660 Km
5.	BC	2.152 Km	27.945 Km	0.855 Km
<b>Structures</b>				
6.	Major Bridge @ 2+910	Span P1- P2 Deck slab concreting completed during this month. 2Nos of Girder Casting completed between span P3- A2. Bottom PCC for VUP at A2 approach Completed.	Bridge has been redesigned by giving 5m vertical clearance conforming to the standards of Inland Navigation Department and the drawings approved by Client. The design has been proof checked by IIT, Palakkad. Pile load test completed at both Abutments. Piling completed for Abutment A1 and pile cap excavation including pile chipping work is in progress. Pier P1, P2 , P3 and Abutment A2 completed. Span P1-P2 & P2-P3- Girder casting, Launching and Deck slab concreting completed. Span P3- A2 – Girder casting completed. Shuttering & reinforcement work for deck slab is in progress. VUP at A2 side - Excavation completed and Raft reinforcement work is in progress.	
7.	Minor Bridge @ 21+162		Bridge completed and opened for Traffic.	
8.	Major Bridge @ 19+758		Bridge completed and opened for Traffic.	
9.	Minor Bridge @ 29+570		Bridge completed and opened for Traffic.	
<b>Culverts</b>				
10.	Pipe Culvert		Pipe Culverts - 6 Completed out of 6 Nos Box Culverts –30 Completed out of 30 Nos Slab Culverts – 28 Completed out of 30 Nos and 1 culvert work is in progress.	
11.	Box Culvert			
12.	Slab Culvert	-		
13.	Gabion Wall	73.170	5967.5 cum Completed	

Physical progress has been corrected in this report based on the remaining works to be completed.

### Financial Progress

Up to end of previous Month	This Month	Cumulative to end of this Month

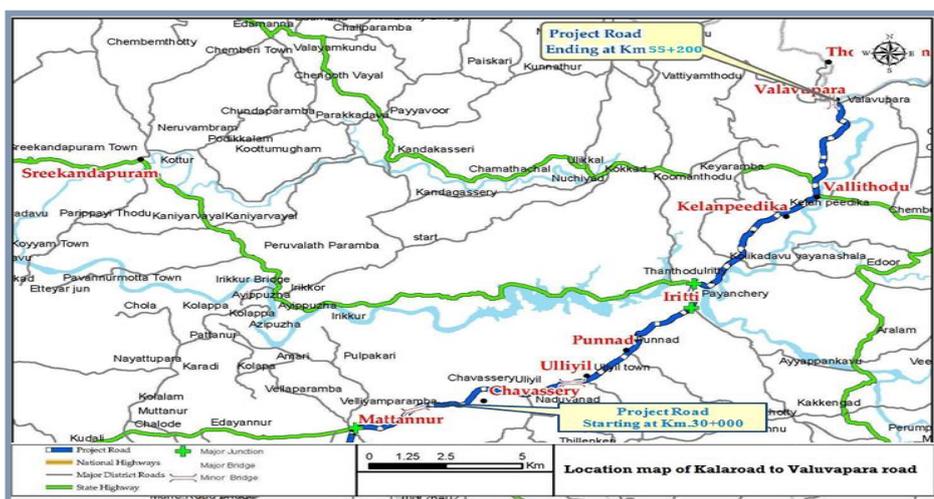
Target	Achieved	Target (as per Rev. Wp)	Achieved	Target	Achieved
70.606%	70.606%	22.672%	3.231%	93.278%	73.837%**

\*\* Cumulative Financial progress achieved is 73.84%.

### Key Issues (Jan 2021)

- Acute shortage of resources affecting the progress of works.
- Time of Completion approved is till 31st October 2020 and about 20% of the works are still remaining to be completed. Progresses of works are slow.
- 570m Eranholi Bridge approach is remaining to be initiated to complete road works.

## 5.7 Package 3B – Kalaroad -valavupara



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan-2021)	Financial Progress in %(Jan -2021)
M/s.GHV-EKK Infrastructure & Co	25-09-2018	209.68	94.32	89.53
<b>EOT-04- for Road Works &amp; Major Bridges (Approved)</b>	<b>TOC Issued for Road works</b>	<b>Variation Order Value in crores (V0-1 to V0-19)</b>	<b>Anticipated Revised Project Cost</b>	<b>Billed Amount made till end of Jan-2021 (Net Amount)</b>
15 <sup>th</sup> July-2019	16 <sup>th</sup> July-2019	9.242	205.22	195.26 Cr
31 <sup>st</sup> Dec-2019				

EOT-06 has been granted to complete the works for Iritty Bridge along with approaches up to 31st December 2020 and Kootupuzha Bridge along with approaches up to 30th April 2021.

Taking over certificates have been issued for a) Km. 30+000 to Km.40+000 with effect from 16<sup>th</sup> March 2019 and b) Km. 40+000 to Km.55 +200 (except Bridges & its Approaches of Irrity and Kootupuzha) from 16<sup>th</sup> July 2019. Further, the Snag list has been complete and the DLP for the taken over sections have been completed. However, since the Bridgeworks and its approaches are to be completed, the Performance certificate has not been issued to the Contractor.

### Work Progress

**Cumulative Physical progress achieved is 94.32%**

Sl. No.	Item	Monthly Progress	Cumulative Progress
1	GSB	0.070	23.67 Km
2	WMM	-	23.56 Km
3	DBM	-	23.56 Km
4	BC	-	23.56 Km
<b>Structures</b>			
5	Minor Bridge Ch. 35+405 Uliyil bridge.		completed
6	Major Bridge Ch. 42+198 Irrity bridge.	Crash barrier and hand rail works are in progress. PCC for A2 side approach slab completed.	Revised drawing for piles (6nos), Pile cap and piers for piers P1 and P2 approved. Foundation & Substructure – Completed.A1-P1, A2-P2 and P1-P2 superstructure work completed except crash barrier, hand rail, expansion joint fixing and wearing coat.
7	Major Bridge ch. 53+865 Kootupuzha bridge	Excavation, PCC and raft concrete for Pier P3 complted. Pier P4 excavation is in progress.	Deck slab of A1-P1 & P1-P2 span completed. Crash barrier and kerb for A1-P1 and P1-P2 completed. Works of P3, P4, A2 stopped by Karnataka Forest Department. Ministry of Environment, Forest and Climate Change (Government of India) issued NOC on 20.04.2020 for restarting the work. Clearance from Karnataka Forest Department received on 24.12.2020. The Contractor has been resumed the work and Raft for P3 completed.
8	Culverts	Nil	Box culvert- 49 Nos completed out of 50 nos.Pipe Culvert- 22 Nos completed out of 22 nos.Widening / slab culvert – 14 Nos completed out of 14 nos.
9	Pre cast Drain - Casting		29842m out of 30922 m.
10	Drain (Precast + Cast in situ) placing	180 m	33700 m out of 36730m.
11	LED Solar Street Lighting	Nil	247Nos.
12	<b>OV Road</b>		

Sl. No.	Item	Monthly Progress	Cumulative Progress
	DLC		806 m
	PQC		806 m
	Drain		1256 m
	DBM & BC		200 m
	Paver Block		2045 Sqm
	Pazhassi Park		Completed

Physical progress has been corrected in this Report based on the remaining works to be completed.

### Financial Progress

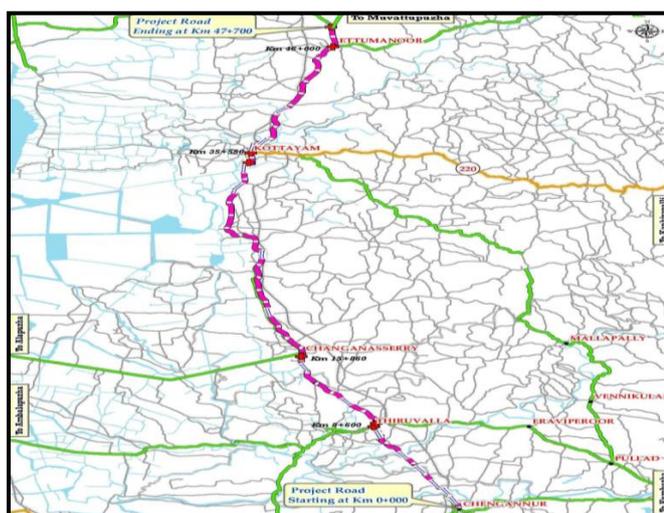
Up to end of previous Month		This Month		Cumulative to end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
100.00%	89.09%*	*	0.44%	100.00%	89.53%

\*\*Cumulative Financial progress is 89.53 %

### Key Issues (Jan- 2021)

- Stock yard for excess earth stacking to be finalised.
- In the heavy rains during the first week of August 2020, a landslide occurred and the high laying portion adjacent to roadway at Km. 42+660 LHS have slide down for a length of 30 m from a height of 12-15 m. Principal approval for construction a gabion wall for this location has been approved by the Employer. Contractor has commenced the work.

## 5.8 Package 4– Chengannur - Ettumanoor – Muvattupuzha – SH1



Chengannur Ettumanoor Muvattupuzha stretch of SH-1, MC (Main Central) Road, one of the most important and oldest roads in Kerala, passing through Thiruvalla, Changanassery, Kottayam, Ettumanoor, Kuravilangad, Kuttathukulam. The total length covered is 88 km.

The road portion from Thiruvananthapuram (Venjaramoodu) to Chengannur was taken up under Phase I Bypass at Thiruvalla also forms part of this stretch. The road passes through the plantation areas and provides access to the tourist centres of Kumarakom and Thekkady. 13 bridges will be constructed in this stretch.

The improvement for this road portion is proposed in three construction packages, Chengannor- Ettumannor (41km), Ettumanoor-Muvattupuzha (47km), and Thiruvalla Bypass (2.30 km). Reconstruction of three Major Bridges and Nine Minor Bridges are included in this stretch.

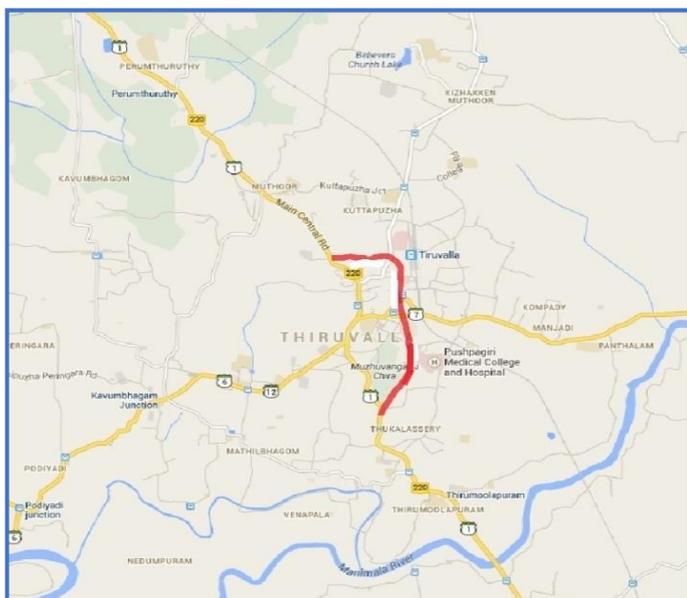
Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
<b>M/s Delma SreedhanyaJv</b>	24-11-2017	293.58	completed	completed
<b>EOT Date (Approved)</b>	<b>TOC Issued date</b>	<b>Variation Order Value in crores</b>	<b>Anticipated Revised Project Cost</b>	<b>Billed Amount made till date</b>
31-03-2018	01.04.2019			

**Salient Features of this Package**

**Scope of Works (45.40 Km):**

- Construction of Major Bridges – 3
- Construction of Minor Bridge – 5
- New Box culverts - 9
- Widening Slab culverts – 8
- Reconstruction of Culverts - 59
- Footpath, solar lights

**5.9 Package 4A – Thiruvalla bypass**



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan -2021)	Financial Progress in % (Jan -2021)
<b>M/s.GHV-EKK Infrastructure &amp; Co</b>	06-10-2019	37.03	87.33	71.02

Date of commencement	EOT-01 – Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of Jan -2021 (Net Amount)
07.01.2019	31.12.2019	1.80 Cr		16.99 Cr

The date of commencement of this project is 07<sup>th</sup> January 2019 and the date of completion is 6<sup>th</sup> October 2019. Works are not completed and EOT-1 issued by the Employer for the whole project upto 30-04-2020. Further EOT-02 recommended to Employer for approval till 30 September 2020. The contractor has been applied for EOT-3 upto 31<sup>th</sup> January 2021.

### Physical Progress

**Cumulative Physical progress achieved till Jan -2021 is 87.33%**

Sl. No.	Item	Monthly Progress (January-2021)	Cumulative Progress
1	GSB	0.00 km	1.75 Km
2	WMM	0.00 km	1.490 Km
3	DBM	0.00 km	1.490 Km
4	BC	0.00 km	1.700Km
5	Roadwork Details	<ul style="list-style-type: none"> <li>GSB Work completed from Km:2+020 to Km:2+100.</li> <li>Embankment filling work is in progress at A1 approach of Viaduct.</li> <li>WMM1 st layer filling work is in progress at A2 side approach of Viaduct.</li> </ul>	<ul style="list-style-type: none"> <li>BC work from Km:0+000 to Km:1+710 has been completed.</li> <li>Construction of islands of road junction at start point (0+000) of bypass is partially completed. Work stopped due to public protest.</li> <li>GSB Work completed from Km:2+020 to Km:2+220.</li> <li>Embankment filling work is in progress at A1 approach of Viaduct.</li> <li>WMM1 st layer filling work is in progress at A2 side approach of Viaduct.</li> </ul>
<b>Structures</b>			
6	Minor Bridge at km 0+390		<ul style="list-style-type: none"> <li>Minor bridge structure completed by the previous contractor.</li> <li>All the remaining works completed and opened to traffic</li> </ul>
7	Viaduct from km 1+780 to km 2+016	<ul style="list-style-type: none"> <li>Casting of crash barrier completed for a length of 350m</li> <li>Approach slab casting completed at both approaches of viaduct.</li> <li>Drainage spout fixing work is in progress.</li> </ul>	<ul style="list-style-type: none"> <li>Piling works completed. Total 60 Nos Done.</li> <li>Pile caps completed at all locations.</li> <li>Pier &amp; Piercap completed at all locations.</li> <li>Deck slab completed at all locations.</li> <li>Casting and erecting of all 36 Nos of PSc Girders Required for Viaduct has been completed</li> <li>Casting of Cross Girder completed at all location.</li> </ul>

Sl. No.	Item	Monthly Progress (January-2021)	Cumulative Progress
			<ul style="list-style-type: none"> <li>• Approach slab casting completed at both approaches of viaduct.</li> <li>• Casting of crash barrier completed for a whole length of Viaduct.</li> <li>• Drianage spout fixing work is in progress.</li> </ul>
8	Flyover at 1+300		<ul style="list-style-type: none"> <li>• Bridge proper completed by previous contractor.</li> <li>• Work on RE wall and friction slab over RE wall at A1 side approach of flyover and BC laying work on both approaches has been completed.</li> <li>• Wearing coarse over Bridge, crash barrier, expansion joint works and crash barrier painting works completed and opened to traffic</li> </ul>
<b>Drain and Protective Works</b>			
9		<ul style="list-style-type: none"> <li>• Balance Hand rail fixing work done at flares of B1-B1 Junction(1+120)</li> <li>• Cross Drain work across PWD Road has been completed.</li> <li>• Reinforced earth wall fixing work at Viaduct A2 approach is completed.</li> <li>• Pipe culvert work at 2+185 has been completed.</li> <li>• Gabion wall work from Km:2+100 to Km:2+150 has been completed.</li> <li>• RCC drain work from Km:1+430 to Km:1+480, LHS is in progress.</li> <li>• RR massonry work under a1 side abutment of Viaduct for protection is in progress.</li> </ul>	<ul style="list-style-type: none"> <li>• RCC drain work completed at Km:0+000 (towards Chengannoor) for a length of 87.5m and from Km: 0+000 to Km:0+012 for a length of 11.5m.</li> <li>• Turfing work from Km: 0+080 to Km:0+600 B/S has been completed and from Km0+600 to Km:0+800. it is partially completed.</li> <li>• Metal Beam crash Barrier fixing work from Km:0+050 to Km:0+800 B/S has been partially completed.1200mdone.</li> <li>• Footpath&amp; hand rail fixing work partially completed at 0+100 and flares of B1-B1 Junction</li> <li>• RR Massonry work on both side of Service road at Km:1+120 towards LHS has been completed.</li> <li>• V drain work completed from Km:1+410 to Km:1+500 B/s</li> <li>• RCC drain work is partially completed at 1+410, LHS(A2 side approach to municipal road connection under bridge). Cross Drain work across PWD Road has been completed.</li> <li>• RR Massonry work under flyover is completed.</li> <li>• RCC drain work from Km:1+430 to Km:1+480, LHS is in progress.</li> <li>• L wall at Km:1+780 RHS has been completed.</li> <li>• RR massonry work from Km:1+750 to Km:1+780 RHS has been completed.</li> </ul>

Sl. No.	Item	Monthly Progress (January-2021)	Cumulative Progress
			<ul style="list-style-type: none"> <li>Reinforced earth wall fixing work at Viaduct A2 approach is completed.</li> <li>RCC Deep drain work completed from Km:2+250 to Km:2+300,RHS.</li> <li>Widening of Culvert at Km:2+300,RHS completed upto Slab.</li> <li>Connection drain work from Km:2+300 to Km:2+350 is in progress.</li> <li>RCC Drain relaying work at 0+050(Mazhuvangad Junction) has been completed.</li> <li>Street light fixing work and A pole fixing work completed from Km:0+000 to Km:1+720.</li> <li>Pipe culvert work at 2+185 has been completed.</li> <li>Gabion wall work from Km:2+100 to Km:2+150 has been completed.</li> <li>RR massonry work under a1 side abutment of Viaduct for protection is in progress.</li> <li>Stone Pitching work for A1 side abutment of Viaduct is in progress.</li> </ul>

Progress achieved up to 31<sup>st</sup> January 2021 in comparison with the original program is given in the table below:

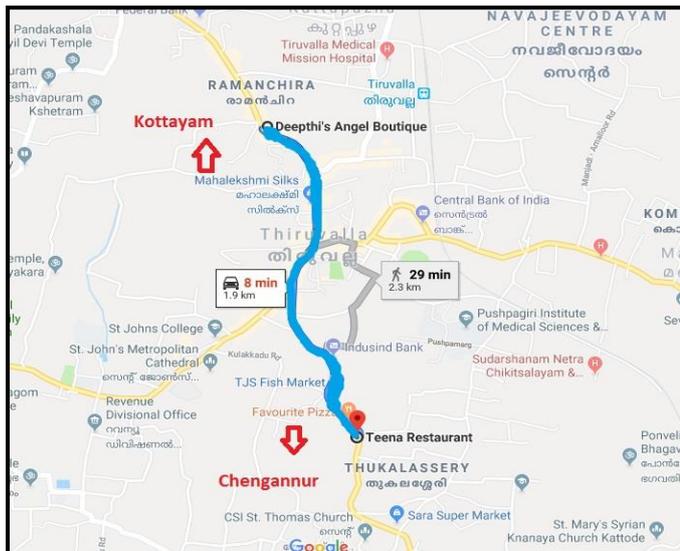
**Financial progress**

Up to previous month		This Month		Cumulative upto end of this month	
Target	Achieved	Target	Achieved	Target	Achieved
100%	68.79%	*	2.23%	100%	71.02%**

**Key Issues (Jan -2021)**

- Due to public protest, gaps left on Metal Beam crash barrier as they have approached the court for providing individual access to their properties. Considering the road safety aspect gaps to be completed.

### 5.10 Package 4B– Thiruvalla town



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan -2021)	Financial Progress in % (Jan -2021)
M/s.GHV-EKK Infrastructure & Co	06-10-2019	7.77	99.00	63.06
Date of commencement	EOT-01 – Approved	Variation Order Value in crores VO-01	Anticipated Revised Project Cost	Billed Amount made till end of Jan -2021 (Net Amount)
07.01.2019	15 <sup>th</sup> Dec-2019	0.202 Cr		4.84 Cr

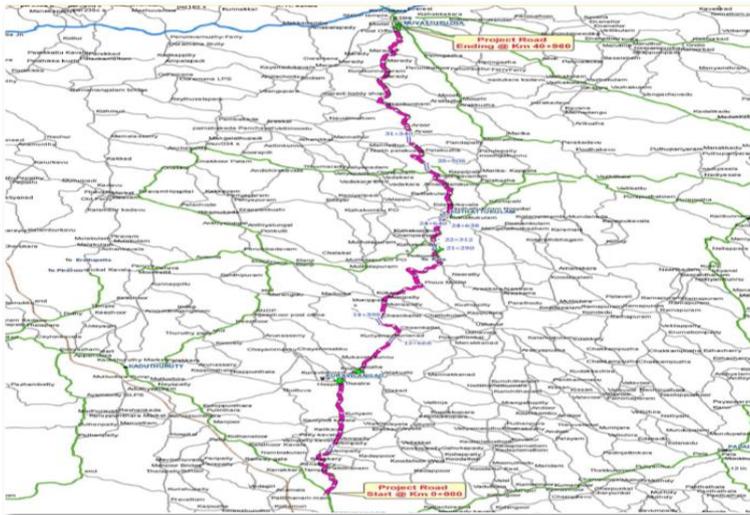
The date of commencement of this project is 07<sup>th</sup> January 2019 and the date of completion is 6<sup>th</sup> October 2019. EOT-1 issued by the Employer for completion up to 15<sup>th</sup> December 2019.

The work has been provisionally completed on 15<sup>th</sup> December 2019 and the Certificate of Completion has been issued on 29<sup>th</sup> May 2020.

Thiruvalla Town road has been inaugurated by Hon. PWD Minister on 11-10-2020

Works as per Snag list has been completed and further defects notified such as rectification of pipe line leakages only remaining to be corrected.

### 5.11 Package 5– Ettamanoor- Muvattupuzha

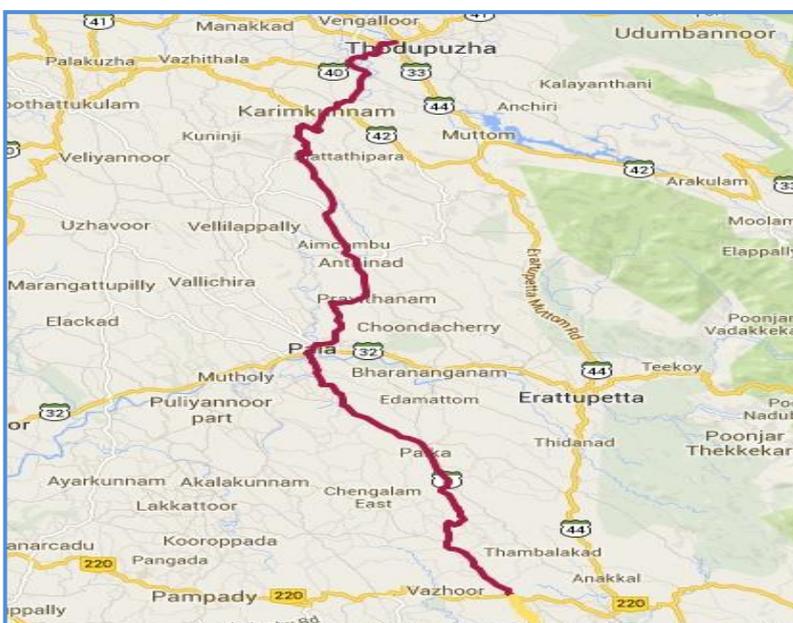


Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
M/s.NAPC Ltd	03-08-2016	171.49	100%	100%
EOT Date	DLP completion date	TOC Issued date	Savings in Crores	Billed Amount made to date in Crores
25-02-2018	25-02-2019	NA	15.28	156.21

This work was completed including the DLP which ended on 25-02-2019. The closure report was resubmitted by CSC and is under review by PMC for further submission to World Bank for compliance.

### 5.12 Package 6-Ponkunnam – Thodupuzha – SH 8

Punaloor - Ponkunnam, and Ponkunnam - Thodupuzha stretches of SH 8 are the two stretches. The total road length is 132 km.



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progres in %
M/s.GHV-EKK Infrastructure & Co	09-12-2016	227.13	Completed	Completed
<b>EOT Date</b>	<b>DLP completion date</b>	<b>Variation Order Value in crores</b>	<b>Savings in Crores</b>	<b>Billed Amount made to date in Crores</b>
28-03-2018	28-03-2019	NA	15.90	211.23

**Salient Features**

Scope of work (46.363 km)

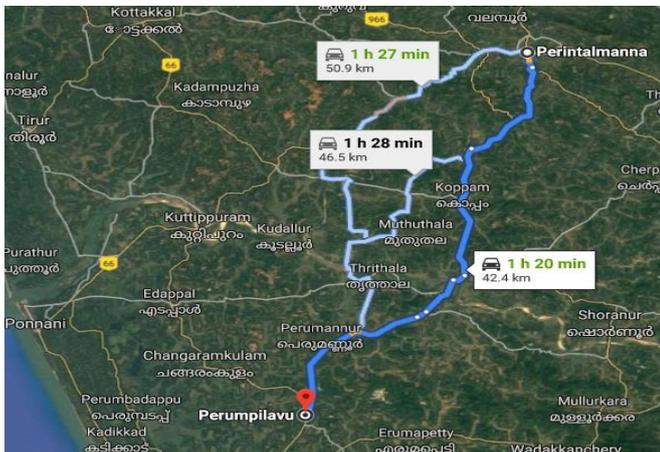
Minor Bridge reconstruction - 1 no.

Culvert:

- Reconstruction - 109 nos.
- Widening - 44nos.
- New Construction - 7 nos.
- Drain - 65 km

This work was completed including the DLP which ended on 28-03-2018. The closure report submitted by CSC was not in accordance with the World Bank requirement. The same is being resubmitted.

**5.13 Package 7 -Perimpilavu -Perinthalmanna**

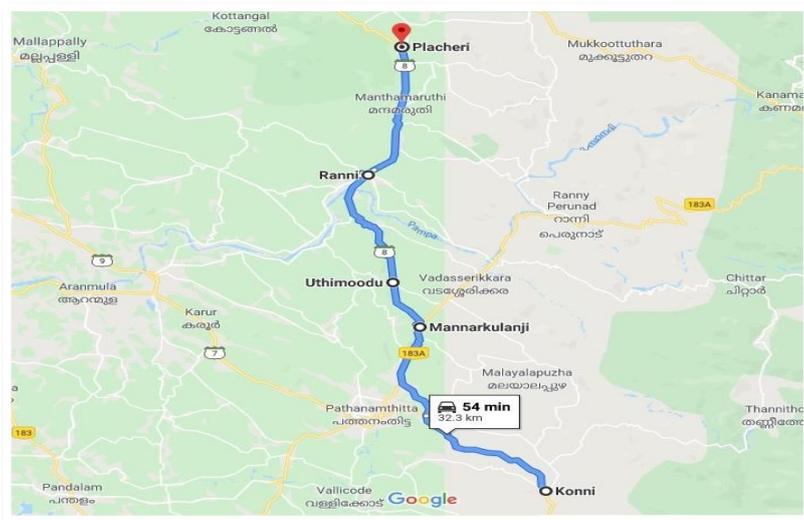


Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progres in %
M/sNathconstructions	02-03-2017	8.11	100 %	100 %
<b>EOT Date</b>	<b>DLP completion date</b>	<b>Variation Order Value in crores</b>	<b>Savings in Crores</b>	<b>Billed Amount made to date in Crores</b>
NA	02-03-2018	NA	NIL	8.11

This work was completed including the DLP which ended on 02-03-2018. The closure report submitted by CSC was not in accordance with the World Bank requirements and hence needs to be resubmitted with all data.

## 5.14 Component A 2:

### 5.14.1 Authority Engineers for Packages 8 A, B, and C & Three RKI Roads



The RFP for appointing **Authority Engineers** for Packages 8 A, B, and C are also uploaded and bids called for. In addition to these three roads, three additional roads from the “Rebuild Kerala Initiative “(RKI) have also been added in the scope of works for the AE role. The additional three roads are complimented under **Component D** which is a newly added component under World Bank funding and is a part of the 59 roads identified by PWD under the Rebuild Kerala Initiative.

Steering Committee has approved in their 108th MOM's dated 17-09-2019 for awarding the Authority Engineer's role to M/s CEG Ltd and accordingly the agreement between KSTP and CEG Ltd was signed on the 16<sup>th</sup> of October 2019. The consultants are in place and works are being supervised by M/s CEG on a day to day basis. Monthly and daily reports of each package under their scope is being mailed regularly by M/s CEG to KSTP also.

### 5.14.2 Upgradation of Road from Punalur to Ponkunnam (82.17 km)

The Component A 2 of the KSTP –II was proposed between Punalur and Ponkunnam road as PPP hybrid annuity mode. For this purpose, KSTP had appointed a Transaction Advisor (TA) M/s L&T Infrastructure Engineering Ltd, Chennai to assist in designing the annuity concession.

The government of Kerala had obtained a loan of 33 USD millions in this component from the International Bank for Reconstruction & Development as financial assistance for the construction cost of the KSTP-II, which aims at Upgrading Punalur to Ponkunnam road (SH 8) from Km 0+000 to Km 82+173 (Package 8A, Package 8B & Package 8C) of State Highway. The Construction Supervision and contract administration of the contracts being procured under EPC modality in three packages is the subject of this Terms of Reference (ToR). In addition to the above, the Government of Kerala has proposed for the rehabilitation of many roads under 'Rebuilt Kerala Initiatives'.

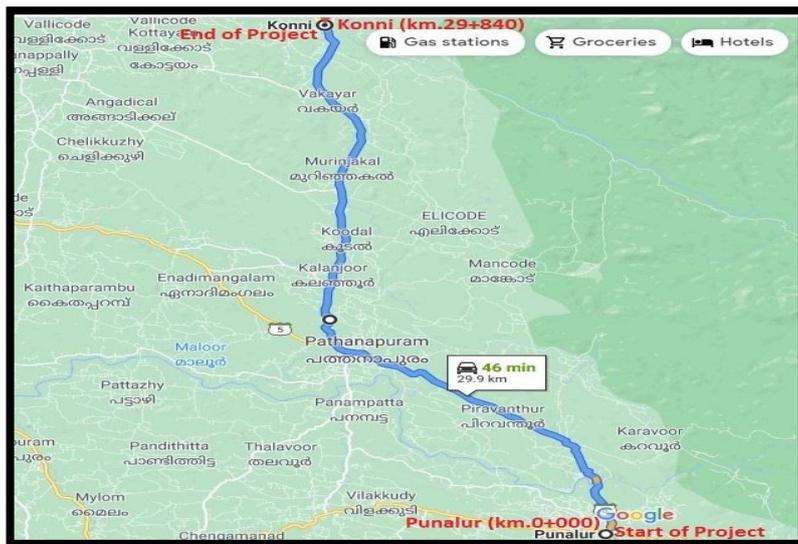
Works: The EPC Contract works in KSTP-II are procured/ being procured in 3 packages along with Three RKI Roads.

These packages are as below:

Sl. No.	Category	Contract Package	Name of Work	Length (Km)	Construction Period	Maintenance Period
1.	Category A	KSTPII/PMT/UG 8A	Punalur to Konni	29.840	24 Months	60 Months

Sl. No.	Category	Contract Package	Name of Work	Length (Km)	Construction Period	Maintenance Period
		KSTPII/PMT/UG 8B	Konni to Placherry	30.160		
		KSTPII/PMT/UG 8C	Placherry to Ponkunnam	22.173		

### 5.14.3 Package 8 A- Punalur to Konni



Government of Kerala through Government of India is in the process of obtaining a loan from the International Bank for Reconstruction & Development as financial assistance for the construction cost of the KSTP-II, which aims at Upgrading Punalur to Ponkunnam road (SH 8) from Km 0+000 to Km 82+173 (Package 8A, Package 8B & Package 8C) of State Highway. The Construction Supervision and contract administration of the contracts being procured under EPC modality in three packages is the subject of this Terms of Reference (ToR). In addition to the above, Government of Kerala has proposed for the rehabilitation of many roads under ‘Rebuilt Kerala Initiatives’. The work has been awarded to M/s RDS Project Limited in JV with M/s Cherian Varkey Construction Co. Pvt. Ltd. with Rs 221.04 crores. LOA was issued on 28/09/2020 and the agreement executed on 27/10/2020.

### 5.14.4 Package 8 A Status- Punalur to Konni

#### Progress of Work

<b>Project Name</b>	Upgrading Punalur to Ponkunnam road (SH 8) Package 8A: Km 0+000 (Punalur) to Km 29+840 (Konni)” on Engineering, Procurement, Construction (EPC)
<b>Length of the Road</b>	29.840 Km
<b>Name of Contractor</b>	M/s RDS-CVCC (JV)
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	27.10.2020

<b>Date of Award (LOA Date)</b>	28.09.2020
<b>Appointed Date</b>	17.12.2020
<b>Construction Period (in Days)</b>	730
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	16.12.2022
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>AE Agreement Date</b>	16-10-2019
<b>AE Mobilization Date</b>	04-11-2019
<b>Chainage of the Project (in Km)</b>	Km 0+000 to Km 82+173
<b>Total Project Cost (in Cr)</b>	221.04

The Construction Works includes

- Scarification, clearance, earthworks,
- rehabilitation of existing bridges/culverts and protective works,
- granular sub-base, wet mix macadam base course, bituminous mix surfacing,
- side drains, sidewalks,
- road markings, road furniture,
- routine maintenance and maintenance during Defects Notification Period.
- Traffic management and environmental protection measures
- Construction and maintenance of diversion roads
- Environmental and Social enhancement works/ landscaping etc., work

### Milestone

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date	
Milestone I	290	20 %	02.10.2021			Pre-construction activities work in progress. Work programmed not submitted
Milestone II	440.	55 %	01.03.2022			
Milestone III	585	75 %	24.07.2020			
Scheduled Completion	730	100 %	16.12.2020			

Up to end of previous Month (December-2020)		This Month (January-2021)		Cumulative to end of this Month (January-2021)	
Target	Achieved	Target	Achieved	Target	Achieved
Mobilization work & preliminary activities in progress					

### Physical Progress

Sl.No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
	<b>Road works</b>					
1	Exc upto SG Top	29.840				Not yet Started
2	Rock cutting	29.840				Not yet Started
3	GSB	29.840				Not yet Started
4	WMM	29.840				Not yet Started
5	DBM	29.840				Not yet Started
6	BC	29.840				Not yet Started
	<b>Structure works</b>					
1	Minor Bridge (Reconstruction)	5 Nos.				Not yet Started
2	Box culverts Reconstruction/New Construction	75 Nos.				Not yet Started
3	Pipe culverts Reconstruction	6 Nos				Not yet Started
4	Slab culverts Widening	18 Nos				Not yet Started
5	Retaining/ Gabion / Toe Wall Length (in M)	8.07 Km				Not yet Started

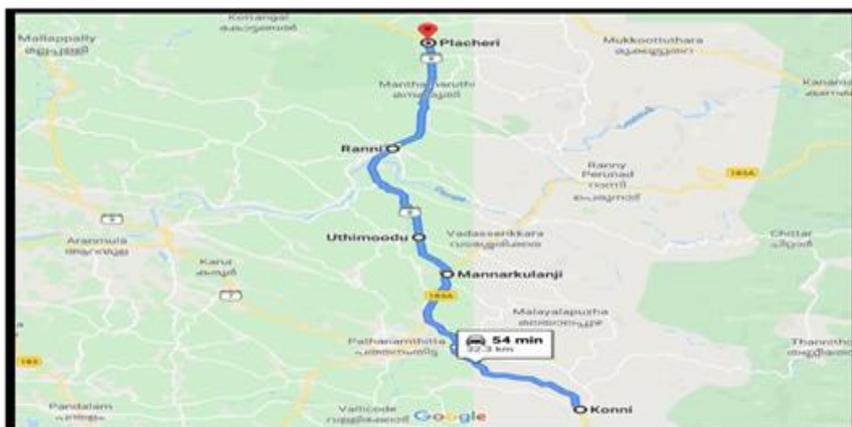
Component	Weightage in % to the Contract Price	Sub Component wise progress during the month			Component wise -Physical Progress (%) Cumulative, Up to Current Month		
		Sub Component	% Weightage	%Progress	During Current Month	Up to previous month	Cumulative, Up to Current Month
Road works	52.59%	<b>Widening and strengthening of existing road</b>					
		Earthwork up to top of sub-grade	0.60%				
		Rock cutting	3.41%				
		Granular Work (sub-base, base, shoulders)	33.37%				
		Bituminous work	22.39%				
		Paver Block	5.53%				
		Widening and repair of culverts	1.34%				
		Widening and repair of minor bridges	5.96%				
		<b>New 2-lane realignment / bypass</b>					
		Earthwork up to top of sub-grade	0.49%				
		Rock cutting	2.11%				
		Granular Work (sub-base, base, shoulders)	7.93%				
		Bituminous work	4.22%				
		Paver Block	0.68%				
		<b>New Culverts, minor bridges, under passes, over passes on existing road, realignments, bypasses:</b>					
		Culverts	0.14%				
		<b>Reconstruction of culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:</b>					

		Culverts	9.84%			
		Minor Bridges	1.99%			
Other works	47.41%	Road side drains	45.59%			
		Road signs, markings, km stones, safety devices, Road Appurtenances	3.76%			
		Bus Bye	2.13%			
		Bus Shelter	0.90%			
		Truck lay bye	0.00%			
		Turfing, Kerb, W' Metal Beam Crash Barrier, Pedestrian Guard Rails	8.22%			
		Safety and traffic management during construction	0.02%			
		Junctions	5.48%			
		Retaining wall	14.53%			
		Footpath, Utility culverts, utility ducts, Roadside Lighting, site clearance, and General Items	19.33%			
		EMP Works and Monitoring of Environment Attributes, ESHS requirement.	0.03%			
		<b>Sub Total C</b>	<b>100.000%</b>			
	<b>100.00%</b>	<b>Total Amount (A+B+C) =</b>				

### Current issues (Jan -2021)

1. Not submitted work programme.
2. Delay in Design & Drawings submission.
3. Applicable permits status not submitted.
4. Man power & mobilization status not submitted

### 5.14.5 8B - Konni – Placherry



This road is proposed to be taken up as Package 8 B with a project length of 30.16 km. The DPR for this was prepared by M/s LNTIEL with an estimated cost of 274.24 Crores. The Bid process was done under NCB, Single Stage, and Two-envelope Bidding Process using E-procurement.

Approval from World Bank was received for this Package 8 B work on 01-07-2019. LOI to M/s EKK Infrastructure Limited on 08-07-2019. On submission of the performance security Environmental, Social, Health, and Safety (ESHS) performance security by the contractor in accordance with the bidding document, the agreement was signed with the contractor on 22.08.2019. The duration of the construction works is 24 months with a maintenance period of 5 Years. Initial preparatory work on this stretch has been commenced by the Contractor and work is in progress on 01.11.2019.

### 5.14.6 Package 8 B Status –Konni to Plachery

#### Progress of Work

<b>Project Name</b>	Upgrading Punalur to Ponkunnam road (SH 8)) Package 8B: Km 29+840 (Konni) to Km 60+000 (Placherry)
<b>Length of the Road</b>	30.160 Km
<b>Name of Contractor</b>	M/s EKK Infrastructure Limited
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	22.08.2019
<b>Date of Award (LOA Date)</b>	03.07.2019
<b>Appointed Date</b>	06.09-2019
<b>Reappointed Date</b>	01.11.2019
<b>Construction Period (in Days)</b>	730
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	29.10.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>AE Agreement Date</b>	16-10-2019
<b>AE Mobilization Date</b>	04-11-2019
<b>Chainage of the Project (in Km)</b>	km 29.840 to 60.000
<b>Total Project Cost (in Cr)</b>	279.00

Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan -2021)	Financial Progress in % (Jan -2021)
M/s.EKK Infrastructure	29.10.2021	279.00	35.10%	20.00 %

Date of commencement	EOT-Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of Jan -2021 (Net Amount)
01.11-2019				55.82 Cr

**Milestone**

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Current Status	Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date (EOT-1)		
Milestone I	290	20%	15.08.2020	20%	27.11.2020 (EOT-1)	Achieved	Revised Programmed not submitted
Milestone II	440.	55%	12.01.2021	35.10 %	26.04.2021 (EOT-1)	Work in progress	
Milestone III	585	75%	06.06.2021		18.09.2021		
Scheduled Completion	730	100%	29.10.2021		10.02.2022		

**Physical Progress (Physical Progress till January 2021 is 35.10 %)**

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress (%)		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative, Up to Current Month
Road Work	45.18%	Up to Subgrade	2.08%	0.399	12.591	7.396	19.987
		Rock cutting	5.90%	5.642			
		GSB (subbase, base, shoulders)					
		GSB	18.509%	3.369			
		WMM	21.919%	0.618			
		Shoulder	0.162%				
		Bituminous work					
		DBM	14.902%				
		BC	11.708%				
		Paver block	5.90%				
		Widening and repair of culverts	2.04%				
		Widening and repair of minor bridges	0.76%				
		New culverts	1.06%				
Reconstruction of culverts	13.08%	9.958%					

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress (%)		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative, Up to Current Month
		Reconstruction of minor bridges	1.98%				
Major Bridge works, under passes, overpasses, and ROB/RUB	0.77%	Foundation	19.03%				
		sub structure	14.47%				
		Super structure (including crash barrier etc. Complete)	66.51%				
Other Works	54.05%	Road Side Drain	36.36%	23.844 %	27.555	20.685	48.240
		Road signs, markings, km stones, safety devices, road appurtenances	2.24%				
		Bus bays	1.23%				
		Bus shelters	0.53%				
		Turfing, kerb, W-metal beam crash barrier, pedestrian guard rails	7.42%				
		Safety & Traffic Management During construction	0.01%				
		Junctions	2.21%				
		Retaining wall	36.19%	24.269%			
		Foot path, utility culverts, utility ducts, roadside lighting, site clearance, an general items	13.72%	0.127			
		EMP works and monitoring of environment attributes, ESHS requirement	0.09%				

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress (%)		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative, Up to Current Month
Total	100%				7.019	28.081	35.10

Sl. No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
	<b>Road works</b>					
1	Exc upto SG Top	29.99	2.935	5.75	24.24	Work in progress
2	Rock cutting	29.99	2.520	28.68	1.31	Work in progress
3	GSB	29.99	2.640	5.46	24.53	Work in progress
4	WMM	29.99	0.845	0.845	29.145	Not yet Started
5	DBM	29.99			29.99	Not yet Started
6	BC	29.99			29.99	Not yet Started
	<b>Structure works</b>				0	
1	Major Bridge	1 Nos.				Not yet Started
2	Minor Bridge	3 Nos.				Not yet Started
3	Culverts	106 Nos.				
	Pre-cast Culverts (Casting)		1 Nos	88 Nos.	18	Work in progress
	Culverts (Laying +Cast-in situ)		5 Nos	51 Nos	55	Work in progress
4	RCC Drain ((Pre-Cast &Cast-in situ)	25780m	2066 m	13983 m	11797	Work in progress
5	Toe wall /Gabion, RCC Retaining wall	6950 m	0.983 m	4661 m	2289	Work in progress

Up to end of previous Month (December-2020)		This Month (January-2021)		Cumulative to end of this Month (January-2021)	
Target	Achieved	Target	Achieved	Target	Achieved
53.72 Cr (19.25 %)	78.35 Cr (28.08 %)	21.30 Cr (7.634 %)	19.590 Cr (7.02 %)	75.02 Cr (26.889 %)	97.94 Cr (35.10 %)

Some of the details of the current work front available (As per Authority Engineer's Report) is as below

1. Work front			2. Length completed by layer (MCW)			3. Length completed by layer (RCC drain and Footpath cum Drain )		
	Length (km)	% Total Length		Length (km)	% Total Length		Length (km)	% Total Length
<b>Total Length</b>	30.160	100%	<b>Total Length</b>	30.160	100%	<b>Total Length</b>	19.70 BS	100%
<b>Total Work front available</b>	29.585	98.09%	<b>Total Length Completed (Till Date)</b>	Nil	Nil	<b>Total Length Completed (Till Date)</b>	Nil	Nil
<b>Pending Land Acquisition</b>	0.575	1.91%	<b>BC</b>	Nil	Nil			
			<b>DGBM</b>	Nil	Nil			
<b>Pending Clearances</b>			<b>WMM</b>	Nil	Nil			
<b>Encumbrance</b>			<b>GSB</b>	Nil	Nil			
<b>Forest Area</b>			<b>Sub-Grade</b>	Nil	Nil			
			<b>Embankment</b>	Nil	Nil			

**Current issues from (Jan-2021)**

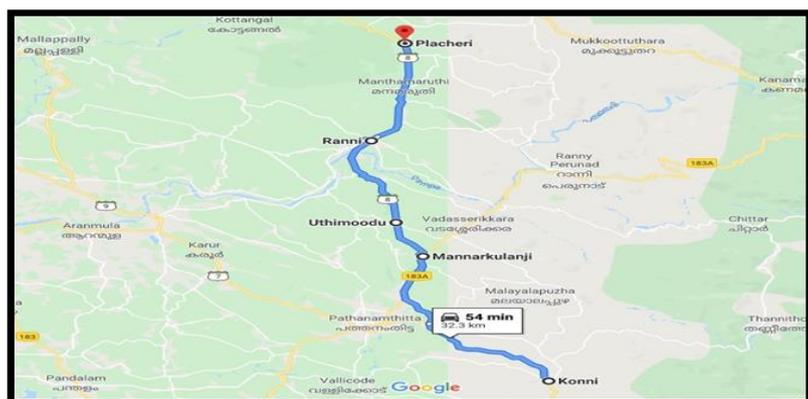
- Slow Progress of works.
- Revised Work programme not submitted.
- PAP’s Issues not finalised

**5.14.7 Package 8 C- Placherry to Ponkunnam**

Three bids were received against this tender as per the table below.

Accordingly, a revised Bid price of Rs 248.62 crores vide their letter to Chief Engineer KSTP dated 07-08-2019 was submitted by the Contractor. This offer was accepted by KSTP and LOI was issued to the Contractor on 13-08-2019. Due to the Election and Moral Code of Conduct, the Agreement was signed with the Contractor on 24.09.19. Initial preparatory work on this stretch has been commenced by the Contractor and work is in progress since December-2019.

**5.14.8 Package 8 C Status –Plachery-Ponkunnum**



**Progress of Work**

<b>Project Name</b>	Upgrading Punalur to Ponkunnam road (SH 8)) Package 8C: Km 60+000 (Plachery) to Km 82+170 (Ponkunnam)
<b>Length of the Road</b>	22.170 Km
<b>Name of Contractor</b>	M/s Sreedhanya Construction Company and M/s Nath Infrastructures
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	24.09.2019
<b>Date of Award (LOA Date)</b>	13.08.2019
<b>Appointed Date</b>	09.10-2019
<b>Reappointed Date</b>	23.12.2019
<b>Construction Period (in Days)</b>	730
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	21.12.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>AE Agreement Date</b>	16-10-2019
<b>AE Mobilization Date</b>	04-11-2019
<b>Chainage of the Project (in Km)</b>	km 60.000 to 82.173
<b>Total Project Cost (in Cr)</b>	248.630

Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan -2021)	Financial Progress in % (Jan -2021)
M/s Sreedhanya & Nath Infrastructures	21.12.2021	248.630	54.50 %	42.08 %
Date of commencement	EOT- Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of Jan -2021 (Net Amount)
23.12.2019				104.63 Cr

**Milestone**

Project	Description	Planned	Actual	Current	Remarks
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Milestone	(Days from Appointed Date)	Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date	Status	
Milestone I	290	20%	07.10.2020	20.00 %		MS-1 Achieved	Revised work programme not submitted
Milestone II	440.	55%	06.03.2021	<b>54.50 %</b>		Work in progress	
Milestone III	585	75%	29.07.2021				
Scheduled Completion	730	100%	21.12.2021				

### Physical Progress

Physical Progress till Jan -2021 is 54.50 %.

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative , Up to Current Month
Road Work	40.30%	Earth work Up to Subgrade	1.10%	0.602	1.891	14.510%	16.401%
		Rock cutting	10.74%	10.462			
		GSB	13.186%	7.356			
		WMM	15.615%	6.419			
		Shoulder	0.114%				
		Bituminous work					
		DBM	11.092	4.433			
		BC	8.716				
		Paver block	4.07%				
		Widening and repair of culverts	0.68%				
		Widening and repair of minor bridges	2.02%				
		<b>B. New 2 lane realignment/bypasses</b>					
		Earth work Up to Subgrade	0.77%				
		Rock cutting	3.01%	3.01			
GSB (subbase, base, shoulders)	9.62%						
Bituminous work	4.95%						

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative , Up to Current Month
		Paver block	1.54%				
		New culverts	0.80%	0.60			
		Reconstruction of culverts	9.47%	7.547			
		Reconstruction of minor bridges	2.51%	0.269			
Major Bridge works, under passes, overpasses, and ROB/RUB	1.16%	Foundation	19.01%				
		Sub structure	14.50%				
		Super structure (incl. crash barrier etc. Complete)	66.49%				
Other Works	58.54%	Casting of Drain (80%)	15.392%	15.392%	0.648	37.447%	38.095%
		Laying of Drain (20)	3.228%	1.325%			
		Road signs, markings, km stones, safety devices, road appurtenances	1.99%				
		Bus bays	0.77%				
		Bus shelters	0.33%				
		Turfing, kerb, W-metal beam crash barrier, pedestrian guard rails	5.68%				
		Safety & Traffic Management During construction	0.02%				
		Junctions	2.13%				
		Retaining wall	59.05%	48.358			
		Foot path, utility culverts, utility ducts, roadside lighting, site clearance, and general items	9.02%				

Component	% Weightage	Sub Component wise progress during the month			Component wise -Physical Progress		
		Sub Component	%weightage	%Progress	During Current Month	Up to previous month	Cumulative , Up to Current Month
		EMP works and monitoring of environment attributes, ESHS requirement	0.03%				
Total	100%						54.50

Sl. No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
	<b>Road works</b>					
1	Exc upto SG Top	22.173	0.825	11.233	10.94	Work in progress
2	Rock Cutting	22.173	0	21.642	0.531	Work in progress
3	GSB	22.173	1.25	11.453	10.72	Work in progress
4	WMM	22.173	1.05	8.440	13.733	Work in progress
5	DBM	22.173	4.973	8.205	13.968	Work in progress
6	BC	22.173			22.173	Not yet Started
	<b>Structure works</b>					
1	Major Bridge	1 Nos.				Not yet Started
2	Minor Bridge	3 Nos.	2 Nos. work in progress			1 Nos Completed
3	Culverts	82 Nos.	2 Nos	58 Nos.	24	Work in progress
4	RCC Drain ((Pre-Cast & Cast-in situ)	14800 m	3250	9327 m	5473	work in progress
5	Toe wall /Gabion, RCC Retaining wall	6180 m	100 m	5061 m	1119	work in progress

Up to end of previous Month December-2020		This Month January-2021		Cumulative to end of this Month January-2021	
Target	Achieved	Target	Achieved	Target	Achieved
101.64 Cr (40.880 %)	129.184 Cr (51.96 %)	21.25 Cr (8.540%)	6.311 Cr (2.530 %)	122.89 Cr (36.117 %)	135.490 Cr (54.50 %)

Some of the details of the current work front available (As per Authority Engineer’s Report) is as below

1.Work front Unavailable & reason for Unavailability			2.Length completed by layer (MCW)			3.Length completed by layer (RCC drain and Footpath cum Drain )		
	Length (km)	% Total Length		Length (km)	% Total Length		Length (km)	% Total Length
<b>Total Length</b>	22.173	100%	<b>Total Length</b>	22.173	100%	<b>Total Length</b>	7.398 (BS)	100%
<b>Total Work front available</b>	22.173	100%	<b>Total Length Completed (Till Date)</b>	Nil	Nil	<b>Total Length Completed (Till Date)</b>	Nil	Nil
<b>Pending Land Acquisition</b>	Nil	Nil	<b>BC</b>	Nil	Nil			
			<b>DGBM</b>	Nil	Nil			
<b>Pending Clearances</b>			<b>WMM</b>	Nil	Nil			
<b>Encumbrance</b>			<b>GSB</b>	Nil	Nil			
<b>Forest Area</b>			<b>Sub-Grade</b>	Nil	Nil			
			<b>Embankment</b>	Nil	Nil			

**Current issues from (Jan -2021)**

- Contractor not providing proper safety at working locations.
- Revised Work programme not submitted
- Poor workmanship observed at Gabion wall & structural Works construction locations.
- Drain at ROW edge.

**5.15 Component B: Road Safety Component**

**The focus of the Road Safety Program Comprises of the following tasks:**

- a. To strengthen the capacity of the Kerala Road Safety Authority and Road Safety Cell of PWD to introduce Sustainable International Best Practice in designing, implementing, and Evaluation on Road Safety.
- b. Development of Safe Corridor Demonstration Project (SCDP) by implementing the Multi-sectoral interventions to demonstrate the effectiveness of Road Safety Best Practices. The Kazhakkootam – Thaikod – Kottarakara – Adoor Corridor (80 km) improved during KSTP-I is identified for this purpose having a high density of traffic. This work is in progress.
- c. Road Safety Capacity Building of the institutions responsible for managing Road Safety in the State.
- d. To replicate the lessons learned from the Safe Corridor Demonstration Project to develop another 10 safe corridors across the State through local partnerships using the challenge fund and the matching fund from the KRSA

KSTP appointed M/s VicRoads, Australia, an internationally experienced consultant to support in implementing the above programs. The consultant has conducted stakeholders’ meetings and trained the Engineers and others in designing various Road Safety interventions in the SCDP. The bid has been approved by the Steering Committee and the works awarded. The overlay works and Road Safety interventions are clubbed. Work commenced and in progress. The proposals for enhancing the existing facilities in the Kottarakara, Adoor, Kesavapuram, and Government Medical College, Trivandrum are under consideration now.

The proposal for strengthening the Kerala Road Safety Authority has been accepted by the Executive Committee and the actions for procuring specialists, for various positions was completed. Appointment orders were issued by the

Transport Department through a Government order and the incumbents have formed. The remuneration of the specialist for the project period is to be paid from the KSTP funds. The TSG is now monitoring the Challenge Fund proposals and coordinating activities of the SCDP Road Project.

Traffic counters were procured and installed at five locations, one in NH and four in location in the project roads. These counters shall be utilized for planning future road geometrics requirements, capacity analysis, seasonal variations, and daily variations of traffic volume during festivals, etc.

KSTP has entrusted the consultant to take action for the procurement of Market Research firms. The market research would support the Development of the publicity and education programs, including future campaigns. Establishing benchmarks on knowledge, attitudes, perception of road safety issues, and self-reported behaviors of road users for monitoring the impact of future road safety activities and to effectively support the task of the Road Safety Capacity Building and Program Management Consultant. The activities have been completed.

The procurement of consultancy services for appointment of firms for Traffic Safety Enforcement and Post Crash Training (trauma care) for the Safe Corridor are in progress aimed at training the Police personnel and for enhancing trauma care facilities in hospitals in the nearby areas of the SCDP. These were expected to be completed by the end of August 2018. The project proposals fixing the last date of submission was on 13.11.2018 under the challenge fund program received from Kozhikode District was been tendered initiating bidding. This was agreed in a meeting held in the room of the Secretary to Government, Transport.

Since the progress of activities was slow, KSTP had earlier decided to terminate the services of M/s VicRoads, but as the consultant had further agreed to speed up the activities, revocation of the decision to terminate was reconsidered. This was revoked and the mobilization of key professionals continued. However, as their term of service is over, alternate arrangements are made through M/s NATPAC. NATPAC has submitted their report for Road Safety treatments (interventions) and is being implemented.

To validate the effectiveness of road safety improvements and under Component B, KSTP decided to implement a project exclusively as a “Safe Corridor Demonstration Project” hereinafter referred to as SCDP. The stretch selected was the Khazakuttom- Adoor Section running a length of 78.65 km. This work involved resurfacing of the pavement to acceptable standards with DBM /BC layers, drainage improvements, road markings, street lightings, crash barriers road studs, footpaths, and many other safety-related items. This work was scheduled to be completed by 2018. It includes a five-year maintenance period in the awarded Contract which will be ending in the year 2024 along with a Defects Liability period of 1 year. This work is being executed under “Item Rate Contract” and is supervised by the SE Divisional Office.

### 5.15.1 Under Road Safety Capacity Building of the institutions responsible for managing Road Safety in the State

Kerala State Transport Project intends to develop post-crash care, which includes both medical emergency services and crash victim extraction as a pilot initiative in the Safe corridor Demonstration Project from Kazhakootam to Adoor stretch of MC road (80 km). For which, KSTP is developing the hospitals in the geographical proximity to the demonstration corridor as resourced trauma care facility and procuring ALS ambulances. The development of Level I and Level II hospital includes both infrastructure development and procurement equipment while in Level III hospital, only procurement of equipments is included. The Department of Health and Family Welfare, Government of Kerala prepared the proposal of Strengthening Trauma Care Services as part of the Safe Corridor Demonstration Project. Accordingly, the proposal received through Health and Family Welfare as below is under implementation by KSTP.

Proposal from the Health and Family Welfare Department				
Sl. No	Name of the Institution	Infrastructure cost (in lakhs)	Additional Equipment cost (in lakh)	Total (Activity)

Equipment				
Level I				
1	Govt. Medical College, Trivandrum	-	1877	<b>18.77 Cr.</b>
Level II & Level III				
2	Taluk Headquarters Hospital, Kottarakara	25	168	<b>6.306 Cr.</b>
3	General Hospital, Adoor	25	418	
4	Community Health Centre, Kanyakulangara	-	22.3	
5	Block Primary Health Centre Vamanapuram	-	22.3	
6	ALS Ambulances		63.9	<b>63.9 lakhs</b>
7	Comprehensive stroke Centre at Govt. Medical College, Thiruvananthapuram	200		
	Total	<b>250</b>		<b>2.5 Cr.</b>
<b>Total Budget proposal (in Lakh)</b>				<b>28.21. Cr.</b>

The proposal is taken up as four activities as follows and approved by the World Bank.

1. *Strengthening Trauma Care Services in Level I and Level II hospitals along SCDP* – Procurement of equipment like Ventilator, Centralized Medical Gas System, Anesthesia Work Station, CT Scan, Ultrasound with Colour Doppler, Flash Autoclave, etc. - Rs 18.77 Cr
2. *Upgradation of Emergency Trauma Care in Medical College, Thiruvananthapuram*  
Procurement of equipment like Neuro Navigation System, CT Scanner, Operating microscope, High and Ultrasound, Surgical Instruments, and 30 other medical equipment - Rs 6.306 Cr
3. *Procurement of Advanced Life Support Ambulances* (2 nos.) equipped with multiple state of the art life-saving equipment for General Hospital, Ayoor and Taluk Head Quarters Hospital, Kottarakara – Rs 63.9 Lakhs
4. *Strengthening Trauma Care Infrastructure* (SCDP) – Developing Infrastructure for Comprehensive Trauma Care Centre at Govt. Medical College, Trivandrum, Trauma area modification at THQH, Kottarakara in the existing casualty at GH, Adoor– Rs.2.50cr

All the activities are coming under the Post Review Threshold of the World Bank.

### The current status

Sl. No	Description	Activities	Amount (Rs.)	Status
1	Civil Works	SCDP- BC overlay and road safety works	146,67,38,745/-	Works completed
2	Traffic Enforcement	1) Consulting Services for Traffic Enforcement	89,11,000/- +GST	final report submitted

		2) Procurement of Utility Vehicles for Police	1,80,00,000/-	Completed
		3) Procurement of Motorcycle for Police	8,00,000/-	Completed
		4) Procurement–Electronics Equipment	52,25,000/-	In progress
		5) Procurement Electrical Equipment	3,15,000/-	In progress
		6) Procurement - PVC and safety jacket	7,57,500/-	In progress
		7) Subscription of iMAAP Crash Data Management system of TRL	40,00,000/-	As a variation of M/s TRL's contract

Sl. No	Description	Activities	Amount (Rs.)	Status
3	Trauma Care	1.Strengthening Trauma Care Services in Level I and Level II hospitals along SCDP – Equipment	18.77 Cr	In progress
		2. Upgradation of Emergency Trauma Care- Equipment	6.306Cr	In progress
		3. Procurement of Advanced Life Support Ambulances	63.9 Lakhs	In progress
		4. Strengthening Trauma Care Infrastructure	2.5 Cr	In progress
4	Community Awareness	KSTPII - Road Safety Education, Awareness and Training Programme and Outdoor Campaign on the SCDP.	31.94 Lakhs + GST	In progress
5	Evaluation	Evaluation of effectiveness of interventions on SCDP	Nil	Entrusted to KRSA-In progress

## 5.15.2 Traffic Enforcement & Crash Data Management System

### 5.15.2.1 Traffic Enforcement:

The Safe Demonstration Corridor Project (SCDP) from Vettu road Junction near Kazhakoottam to Adoor on MC Road (SH1) is identified as a high risk and high-volume corridor for implementing the program. It envisages several road safety interventions and countermeasures to reduce fatalities and injuries due to road crashes in “4E” concepts i.e., Engineering, Enforcement, Education, and Emergency Trauma Care. The program will implement multi-sectoral road safety initiatives by associating with other stakeholders’ departments like Police, MVD, PWD, and Health in establishing a sustainable road safety model that can be replicated elsewhere in the state with the view of achieving a reduction in number and trauma severity of road crashes.

For developing an efficient Enforcement strategy, analysis of statistical data collected from the actual incidents recorded from each scene is inevitable. A reliable crash data is necessary for implementing target-oriented multi-sectoral interventions. The information derived from the crash data analysis will enable a data-led approach to Road safety Enforcement.

To reduce the road crash, KSTP has appointed an international consultant M/s TRL-JP Research JV to develop and implement an evidence-based road safety enforcement strategy. The consultant had reviewed various available reports such as the iRAP study, baseline study conducted by NATPAC, seat belt, and helmet study by Vic Roads, overtaking study, etc. The consultant had also visited the police stations in the vicinity of the corridor to gather information on crash locations and profiles of blackspot and vulnerable locations, road user category, enforcement programs, equipments, etc. Based on the baseline study and observation of current road use practices, an enforcement strategy plan was prepared by the consultant. For this purpose, a focus group discussion was held with the various stakeholders.

To manage and control traffic most safely and effectively in the corridor through the scientific application of systems and techniques, a two-day training for 27 Police officers and 7 MVD officers as trainers from the southern range was given by M/s TRL on 7th and 8th May at Police Training college Trivandrum and 2-day training for selected 151 Police officers and 21 officers from MV department respectively from 9 Police stations and 5 MVD offices having jurisdiction over the project area was given by TRL from 13th May to 18th June (9batches) at Jubilee Mandiram, Kottarakkara.

### 5.15.3 Crash Data Management System:

For developing an efficient Enforcement strategy, analysis of statistical data collected from the actual incidents recorded from each scene is inevitable. A reliable crash data is necessary for implementing target-oriented multi-sectoral interventions. The information derived from the crash data analysis will enable a data-led approach to Road safety Enforcement.

To reduce the road crash, KSTP has appointed M/s TRL to develop and implement an evidence-based road safety enforcement strategy. The police department has informed that as part of the outcomes related to the Safe Corridor Demonstration Project, M/s TRL has provided two software licenses for the State Police to access the Crash Data Analysis and road safety management solution (iMAAP) for the 85km stretch from Kazhakoottam to Adoor. The crash data collected from the 9 police stations along the corridor has already been exported to the iMAAP. The crash data management system provided for SCDP has been deployed across the State of Himachal Pradesh for over 3 years now by TRL.

It is also informed by the Police department that, M/s TRL has offered unlimited licenses for multiple stakeholders in Kerala to access the software at an annual fee to the State Government (the SAAS model) and host the iMAAP solution on the Ministry of Electronics and Information Technology approved cloud server. The Police department would like to have a modern Road Accident Data Management System to enable robust data analysis and data-led and targeted interventions to reduce road accidents and improving road safety. For that, the Police department has forwarded the details of iMAAP solution received from M/s TRL to consider under KSTP II.

M/s TRL has offered a proposal for iMAAPcloud based solution on a Software-as-a-Service (SAAS) model which is having the key elements as follows.

- I. The iMAAP solution would be hosted on a Ministry of Electronics and Information Technology (MEITY) certified cloud server by TRL.
- II. The maintenance and upkeep of the software for the smooth functioning of the software will be provided by TRL, along with any updates to the software.
- III. License and access to the product will be provided for up to 1000 users amongst authorized employees of the Government of Kerala subject to standard log-in credentials.

The SAAS package is being offered to the Government of Kerala at an Annual Subscription Fee. The expected fee, subjected to confirmation through our Techno-Commercial offer expected to be less than or equal to Rs 40 Lakhs per annum to the Government of Kerala.

Whether the proposal one-year subscription may be considered as a variation to the existing contract of M/s TRL for Consulting Services for Traffic Management and Road Safety Enforcement Program on Safe Corridor Demonstration Project-Engaging Traffic and Road Safety Enforcement Specialists.

**Staus:** TRL has submitted the draft final report with crash data analysis, Traffic enforcement plan, and specifications for enforcement equipments. KRSA was to review this draft and revert.

***Purchase of enforcement equipments:***

Procurement of Enforcement Equipments for police on SCDP-Electrical to submit through tender notice such as Light Baton Signal, LED Portable Flood Lights & Traffic Signs Collapsible was completed.

#### **5.15.4 Road Safety Education, Community Awareness and Training Programme and Outdoor campaign on the Safe Conidor Demonstration Project (SCDP)**

This supplementary agreement is executed on this the day 28<sup>th</sup> of June 2019 BETWEEN the Project Director, Kerala State Transport Project, PMT, Thiruvananthapuram, and the Director, KSCSTE, National Transportation Planning, and Research Centre - A unit of Kerala State Council for Science, Technology, and Environment (KSCSTE), Government of Kerala.

SCDP envisages several road safety interventions and countermeasures to reduce fatalities and injuries due to road traffic crashes. One of the sub-components of the project would be to impart knowledge in Traffic rules Road Safety and basics of First aid and Life support among local community School Children, Drivers, and youth within and outside the protected area. This Programme is expected to bring about good road sense and qualitative changes in road user behavior of different categories of road users and their attitude towards the accident victims in helping them giving First aid and transportation to the hospital in time.

It is proposed to carry out six Programmes one each at the following six police stations with 50 participants per Programme :( i) Pothencode, ii) Venjaramoodu, iii) Kilimanooriv) Chadayarmangalarnv) Kottarakkar & vi) Adoor

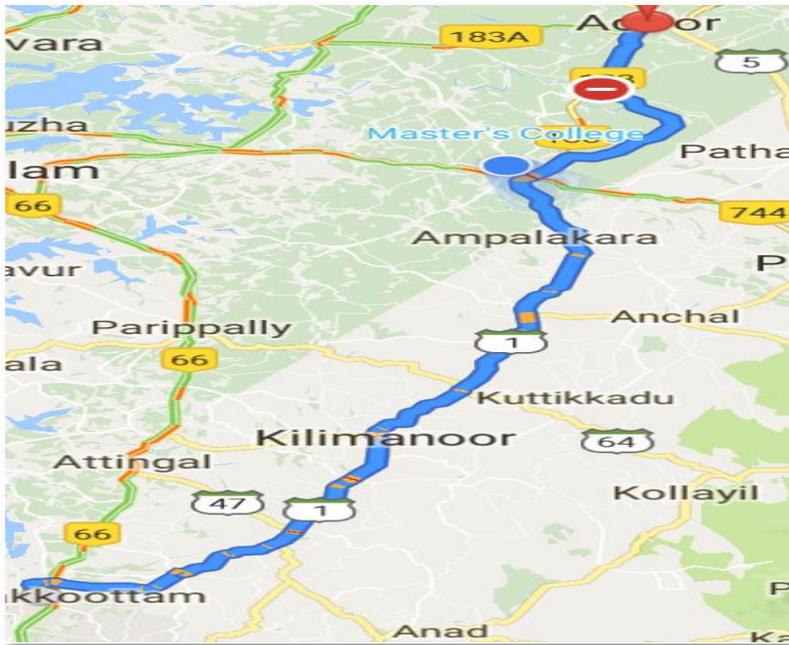
***The objective of the program is:***

- a) To provide road major safety education/awareness by film shows, stickers, and distributions of pamphlets at major junctions.
- b) To organize public meetings in association with LSGD and police and NGOs in the respective area/ task/audio-visual shows on road safety and safety measures/traffic control devices in major junctions, accident-prone areas, and townships in road stretch.
- c)To display banners /wall posters depicting road safety slogans in public places, offices, educational institutional, and bus stands.

The total duration project is 12 months as per ToR which is estimated to cost around 32 lakhs.

**KSCSTE-NATPAC** has expertise in providing road safety education to various categories of road users. As part of the present assignment, it is decided to conduct 40 Programmes covering four inputs groups. The Interim Report-2 has been submitted by the NATPAC, which was comprising of the details on 30 programs conducted for this project.

### 5.16 MC ROAD - KAZHAKKOOTTAM – ADOOR 78.65 KM



<b>Project Name</b>	KSTP-II – MC Road - Safe Corridor Demonstration Project – BC- Overlay & Road Safety Works from Kazhakoottam to Adoor (0/000 to 12/600 (Bye pass) and from 25/250 to 93/000)
<b>Name of Contractor</b>	M/s GHV-EKK (JV), Second Floor, Municipal building, Perumbavoor, Ernakulam, Kerala
<b>Agreement No &amp; Date</b>	Agreement. No. 276/KSTP/PMT/PWD/2016 dated 05/12/2016 (Contract. No. KSTP/PMT/BCO&RS)
<b>Date of Commencement</b>	28 <sup>th</sup> December 2016
<b>Time of Completion as per agreement</b>	16 months from the date of commencement – 27.04.2018
<b>Extended Time of Completion</b>	Up to 30.09.2020
<b>Contract Amount</b>	Rs 146,67,38,745/-
<b>Revised Project Cost</b>	Rs .137,88,30,271/-* (* denotes Subject to change in variation)

#### **Financial Progress.**

The Financial progress is 90.42 % as of 31-01-2021 in with respect to the Revised Estimate of 137.88 Cr. As Per Original Contract Price Financial Progress is 84.83%. The total amount paid to the Contractor till January 2021 is 124.43 Cr.

**SCDP - PHYSICAL PROGRESS OF MAJOR CIVIL WORKS JANUARY-2021**

SI No	Item	Unit	Quantity					Remarks
			As per BoQ	As per variation	Anticipated Qty	Completed	Balance	
1	Drain	m	6274	14488	15100	15760	-660	On going Quantity Increase
2	Culvert	No						
	New- Box		10	14	14	14	0	Completed
	Hume Pipe			1	1	1	0	Completed
	Widening			3	5	5	0	Completed
	Minor Bridge			1	1	1	0	Completed
	<b>Total</b>			<b>19</b>	<b>21</b>	<b>21</b>	<b>0</b>	
3	Retaining Wall	m <sup>3</sup>						
	R R		8847	1543	2847	2698.30	6148.70	
	Gabion		0	6085	6085	5890	195	
4	DBM	m <sup>3</sup>	9524	9818	11100	11225.44	-1701	
5	BC	m <sup>3</sup>	39396	39396	42000	42375	-2979	
6	Interlocking blocks	m <sup>2</sup>	58988	16723	13707	11495	47493	
7	RCC	m <sup>3</sup>	8036.8			6234.00	1802.81	

**SCDP - PHYSICAL PROGRESS OF MAJOR ROAD SAFETY WORKS - JANUARY-2021**

SI No	Item	Unit	Quantity					Remarks
			As per BoQ	As per variation	Anticipated Qty	Completed	Balance	
1	Drain cover slab	m <sup>3</sup>	49478		54469	54469	-4991	On going
2	W Beam Crash barrier	m	15015	8295	9141	0	15015	On going
3	Road Marking	m <sup>2</sup>	81726	70523	57061	54112	27614	On going
4	Road Studs	E	56437	56654	68950	76850	-20413	On going Quantity Increase
5	Sign Boards	E	9873	9873	3931	2077	7796	On going
6	LED Solar Street light	E	2000	1127	890	844	1156	On going
7	Kerb 250 mm	m	211052	16747	31000	26111	184941	Ongoing at junctions
8	Kerb 100 mm	m	42211	46775	12500	11506	30705	Ongoing at junctions
9	Antifungal Designer Tile	m <sup>2</sup>	23610	68420	43000	43154.75	-154.75	Ongoing at junctions
10	Hand Rail	m	21400	20900	19328	20413	987	Ongoing at junctions

**Physical Status:**

The Physical Progress is 91.92 % as per original Contract Price.

**Key Issues from (Jan -2021)**

- Contactor has finished EOT on 30th September 2020
- They are doing balance work with LD charges

**5.17 Road safety Challenge Fund**

In continuation with Safe corridor Development Project, and under 5.16 d, where in the lessons learnt from SCDP will further be replicated and additional 10 roads will be developed as safe corridors.

Currently under the Road Challenge Fund, five roads as identified by KRSA (Kerala Road Safety Authority) vide letter No A2/283/KRSA/2018 Dated 08.03.2019 a field visit to all these roads was conducted by the PMC along with the Traffic Safety Group as desired by World Bank in their Minutes of Meeting held on 12th April 2019 to further reconfirm the adequacy of the proposals submitted and finalise the TOR for DPR's.

Three roads were visited on the 25th and 26th April 2019 and the balance two road visits were completed on 6th of May 2019. List of roads selected, and their tentative estimated costs are tabulated in Table 4 below.

Table 4

Road no	Name of Road	Estimated Cost in Crores	Revised Cost in Crores	Length in Km	District
KSTP-II/CF-1	Pavangad-Korapuzha	10.02	5.65	5.5	Kozhikode
KSTP-II/CF-2	Safe Road Project-Trivandrum Medical college -Kannamoola, Pallimukku-Pettah	7.5	4.50	3.8	Trivandrum
KSTP-II/CF-3	Kottiyam-Kundara Road	4	16.30	11.7	Kollam
KSTP-II/CF-4	Vypin-Mannambam	5	30.50	25.18	Ernakulam
KSTP-II/CF-5	Thrissur-Kunnamkulam State Highway	10	39.09	25.82	Thrissur
	<b>Total</b>	<b>36.52</b>	<b>96.04</b>	<b>72.38</b>	

**Status of the project upto this month (Jan- 2021)**

- Field investigation completed
- Topographic survey for 25 major junctions.
- Road Inventory survey
- Turning Movement Count surveys for 25 major junctions.
- Speed and Delay survey for all the five corridors.
- Parking survey for all the five corridors.
- LUX meter survey for all the five corridors.
- Accident data for all the five corridors.
- Strip Plan preparation was completed for all the Five Corridors.
- Improvement Proposals as per the scope of work completed for two roads.
- Field Study Report – will be submitted on 05.03.2020
- Draft DPR – was submitted on 18.03.2020
- PMC has reviewed and passed comments on Draft DPR on 30.04.2020.

- The Final DPR was submitted.
- Bid Document Submitted.
- Retender For 3<sup>rd</sup> time in January 22<sup>nd</sup> 2021. Bids received on 5-02-2021.
- Bids under technical Evaluation

From Table 4, Road No 1 Pavangad-Korapuzha work was awarded by KSTP in 2019 and execution taken charge by Ex Engg NH Division. The agreement for this work was signed vide No 304/KSTP/PMT/PWD/2019 Dated 08-03-2019 and awarded to M/s NATH Infrastructure for Rs 8,36,63,500.00 with a completion time of 12 months. The details and drawings as prepared by DPR Consultant now M/s EGIS is submitted to NH Ex Engg on 27<sup>th</sup> Aug 2020 for implementation.

Road No 5 - Thrissur-Kunnamkulam State Highway is dropped from Challenge fund as this work is being taken up under RKI works of KfW funding Package 4. Only three roads viz: Road # 2 , # 3 & # 4 were to be tendered. Accordingly, these three works were re-tendered on **etender Kerala portal** on 22-12-2020 with the Last Bid Submission date being 05-01-2021. After pre-Bid query from one of the Bidders was received for Road No 2, it was seen that there were some discrepancies in the Items specifications and hence the tenders were canceled and withdrawn. These were to be corrected and re-submitted by DPR Consultants M/s EGIS and the corrected ones were received on 13<sup>th</sup> November 2020. After due checks, these are being uploaded on the e-tender portal on 22-12-2020 with a last date of Bid Submission as 05-01-2021. The bids have been received for One Road. The details of bidders are listed below.

Sl.No.	Name of Roads	Name of Bidder ( Bid was opened on 05.01.2021)
1	CF-Road 2	Nil
2	CF-Road 3	Nil
3	CF-Road 4	1. M/s. Palathra Constructions

The details of these works tendered are as below mentioned Table:

Challenge Fund Roads -Tendered in January 2021							
Road. No	Stretch of the Project Road	Length (Km.)	Tendered Cost of the Project (Cr. incl GST)	District	Bid opened date	Bid response	Status
2	Medical College-Kannamoola-Pallimukku-Pettah	3.80	4.5	Trivandrum	05.01.2021	No Bid received	Evaluation completed and Non responsive
3	Kottiyam-Kundara Road	11.70	16.30	Kollam	05.01.2021	No Bid received	
4	Vypin-Munambam	25.18	30.50	Ernakulam	05.01.2021	1 Bid received	
	Total	40.68	51.30				

Total Cost in US Million	<b>7.18</b>
Conversion of USD to Rs is 1:7.1 Rs	
GOK's share in Crores with 56 % WB Funding will be	<b>28.57 Lakhs</b>

The roads were proposed for Retender as per Table below with the following revised conditions in January 2021.

<b>Challenge Fund Roads -Retendered in January 2021</b>						
<b>Road .No</b>	<b>Stretch of the Project Road</b>	<b>Length (Km.)</b>	<b>Tendered Cost of the Project (Cr.)with GST</b>	<b>District</b>	<b>Suggested Modification in Construction Months</b>	<b>Suggested Action</b>
2	Medical College-Kannamoola-Pallimukku-Pettah	3.8	4.5	Trivandrum	3	Retender
3	Kottiyam-Kundara Road	11.7	16.3	Kollam	9	Retender
4	Vypin-Munambam	25.18	30.5	Ernakulam	9	Retender
	Total	40.68	51.3			

The last date to receive Bids is 5-02-2021

## **5.18 Component C: Institutional Strengthening Component – Current Status**

### **5.18.1 Road Sector Modernization**

Under this Component C, KSTP has already arranged and completed studies and DPR preparation for Road Rehabilitation Projects, Strategic Option Studies for improving MDRs (newly taken over from Panchyat), and Design of Green Building for KSTP and PWD Head Quarters, Review of IT system in PWD and other small studies with Bank's approval. The amount spent is Rs. 4.70 crore.

Further, KSTP has streamlined the activities under the Road Sector Modernization in the Institutional Strengthening component considering, the current priorities of the State, in lieu of the Strategic Road Network Program which include: Consultancy services for Institutional Strategy and Action Plan for Centre of Excellence for Kerala Road Sector across five identified Thematic areas.

### **5.18.2 Institutional Strategy and Action Plan for Centre/s of Excellence/s for Kerala Road Sector across five identified thematic areas (KSTP – II)**

Accordingly, KSTP, under PWD, GoK has appointed Deloitte Touche Tohmatsu India LLP, in joint venture with Consulting Engineers Group Ltd., to provide consultancy services for developing an Institutional Strategy and Action Plan for the creation of "Centre/s of Excellence/s" for the Kerala Road Sector across five identified thematic areas. The Contract Agreement was signed on 16th February 2019 and the Consultant's Team was mobilized on 1st March 2019.

The Consultancy services were provided in two phases as below:

Phase I: Institutional Review and COE/s Conceptualization Phase	06 Months
Phase II: Implementation Support	12 Months

The five thematic areas covered under this study were as follows :

1. Innovation in design/ construction practices
2. Road asset management
3. Road safety management
4. Quality assurance & contract management.
5. Promoting indigenous research and development.

### **Overall Approach and Methodology**

A multidimensional, consultative approach was adopted during the execution of this study. As part of this study, the steps carried out were

- a) A detailed diagnostic of the processes of PWD and the associated entities,
- b) An in-depth study of KHRI and NATPAC,
- c) A benchmarking study across national and international Centres of Excellence in the related sector and
- d) Consultations with stakeholders during the study. Based on all inputs obtained, recommendations have been made on the proposed Centre of Excellence.

As part of this study, eight reports (including this report) were required to be submitted and these are as below :

S.No.	Deliverables
1	Inception Report
2	Report on Diagnostic Review
3	Draft Report on Institutional Options
4	Report on Institutional Review –KHRI & NATPAC
5	Report on 1st Stakeholder Workshop
6	Report with recommendations on the proposed CoE
7	Report on 2nd Stakeholder Workshop
8	Final Report on Institutional Framework & Action Plan for COE
9	Preparation of Cabinet Note and presentation to PWD/ GoK – to be submitted based on final discussions with the KSTP team.

Deloitte Touché Tohmatsu India LLP in JV with Consulting Engineers Group as Consultants for this study have submitted the following reports.

1. Inception Report-The Report covers the understanding of the envisaged scope of work, the methodology for undertaking the specific activities under the engagement, the progress of preparatory work undertaken, and the way forward to successfully execute the assignment.
2. Report on Review of Sector Themes and Institutional Arrangement.
3. An assessment of existing knowledge and capabilities, the detailed processes that pertain to each of the themes, and the institutions that are involved in executing these processes have been captured.
4. Based on the study of the asis processes and the ideal state scenario, gaps have been identified.
5. The need for the CoE(s) and the possible roles that the CoE(s) can play in each of the themes has been discussed

A review of the policies pertaining to Kerala PWD has been provided. Subsequently, a discussion on the institutional arrangements that exist in Kerala, that are carrying out functions pertaining to the five themes of this project has been provided. They were also asked to prepare a concept note on Core Road Network Authority or State Highway Authority of Kerala (SHAK) and roadmap for planning & execution of climate-resilient Road infrastructure as these are prior and post-action points agreed to by the PWD as part of Programme under loan of Resilient Kerala Initiative (RKI). A

presentation of the same was done by Deloitte Touché Tohmatsu India LLP in JV with Consulting Engineers Group Limited on the 11<sup>th</sup> of Nov 2019. The proposal to implement their strategic plan is to be put up to GoK for approval as Maturity Level 1 inducting a Task Force.

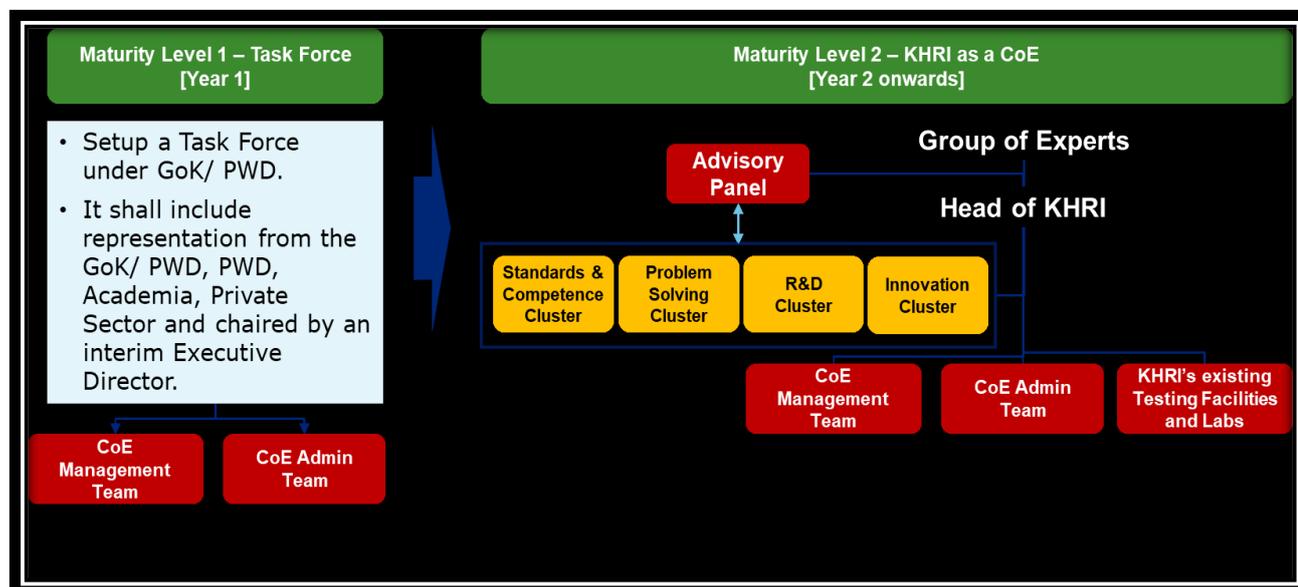
### Generic Activities of CoE

- Mapping of emerging issues and requirements
- Developing a Foresight & Vision
- Identification of Strategic Research Agenda [continual]
- Implementation Plan [from time to time]
- Developing and promoting researchers
- Facilitation technological innovation system to apply research results into application
- Dissemination of Research & Innovation Results [manual, periodic updates through publications]
- Creating Knowledge Sharing Platform
- Ensuring Stakeholders Participation

It is recommended that the entity be established in phases i.e, It first begins as a Task Force and then over time evolve into a full-fledged autonomous entity. The governance model of the CoE also would therefore follow this maturity model. In the exhibit below, a two-level maturity setup is shown. It is to be noted that the two levels are not time-dependent but are dependent on the success of the CoE and decision by the Government of Kerala with recommendation from Task Force.

### Structure of CoE

The CoE is proposed to be a lean, thin, and almost virtual entity, to be developed and expanded in phases of maturity, the first being as a Task Force, which will run over the first one year. The composition of this Task Force is depicted in the chart at Annex 1.



The setting up of CoE involves expenditure of fixed and variable nature; the fixed cost will remain almost fixed subject to normal annual increase, while variable expenses will be related to the volume and nature of works undertaken by CoE. The total expenditure envisaged over 5 years is Rs. 31 Crore. This includes a research fund of Rs. 7 Crore that is also envisaged. The 8th deliverable & 9th deliverable sent to GoK on 15.05.2020. Due to the pandemic, an extension for COE service up to 30/12/2020 has been proposed.

### 5.18.3 Road Maintenance & Management Services

Under the Institutional Strengthening Component C, a proposal to implement RMMS was considered.

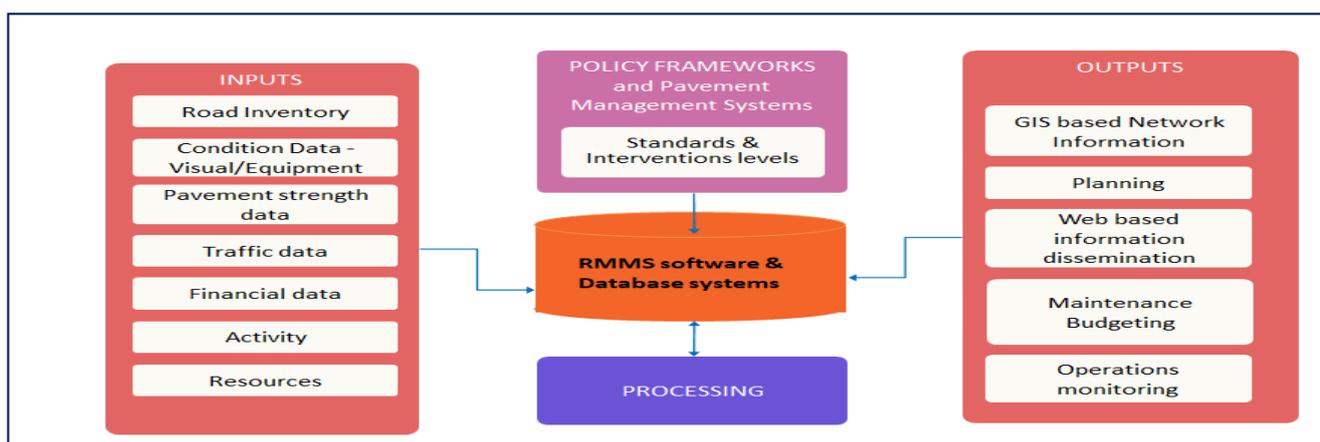
#### Objective

The overall objective of the proposal was to establish an enhanced and user-friendly Web-based Road Information System and Road maintenance management system for the State PWD roads and to ensure that PWD can effectively plan and prioritize its road improvement and maintenance works and to prepare realistic proposals for budgetary allocations. This will improve the quality and delivery of PWD services in the maintenance of road networks. To implement this, it was decided to get the Detailed Project Report done through Central Road Research Institute (CSIR-CRRI) New Delhi. The contract with CRRI was signed vide Contract No 305/KSTP/PMT/PWD/2019-20 Dated 19.06.2019. The entire task will be completed in 18 months.

Even though Kerala PWD has established a GIS-based Road Information system and HDM-4 based Road Maintenance Management System (RMMS) way back in 2007, the same could not be used as it was envisaged due to various reasons and are now outdated and redundant. Apart from this, there was no established framework and expertise in the Department to have a sustained data collection of the inventory and condition data of road assets systematically. Hence, as part of the revival and up-gradation of the existing RMMS systems, the Department approached the Central Road Research Institute New Delhi to explore the possibility of setting up a working Road Asset Information and Management System with an initial data collection of condition and inventory data for a selected road length using the advanced network survey vehicle of CRRI. Based on the detailed discussions and deliberations the CRRI has given a proposal for setting up a working RMMS for the Department with data collection of 4000 KM of selected roads using the network survey vehicle along with technical assistance for establishing related software requisites and trainings.

E-Governance wing of Kerala PWD has proposed to have an effective working **Web and GIS-based** Road Information and Road Maintenance management System capable of delivering all required asset management information and analysis and outputs suitable for use in the Pavement Management Systems like HDM-4 thereby Public Works Department would be able to generate realistic road maintenance plans and budget. It is also envisaged that after establishing such a system in PWD, the concerned Field engineers of the Road Maintenance Wing and Engineers in charge of the Central RMMS unit would be trained in data collection and inputting, usage of the RMMS system and HDM-4 software so that the Department would be able to sustain and scale the RMMS system for all PWD roads in the State.

**RMMS- GENERAL ARCHITECTURE:**



The procurement of this was hosted on the E –portal of the Kerala Government as a single-stage Bid document On 19-10-2019 and subsequently a pre-bid meeting was held on 5<sup>th</sup> Nov 2019

The period of assignment is 8 years and 6 months (6 months implementation, 5 years warranty period, and 3 years extended period of service). The bids were opened on 23.12.2019. The bids were invited on a single-stage system. Three bidders responded to the tender. The details are as follows :

TRL Professional JV with Experian Technologies (India) Pvt Ltd has been awarded a contract. Letter of Award was issued to Bidder on 07.05. 2020. The agreement was signed on June 5<sup>th</sup> with Bidder with an Estimated price of 4.54 Cr.

**Status**

TRL was Mobilised on 1<sup>st</sup> August-2020. The consultant submitted the Draft PMP on 03-08-2020. The committee has reviewed PMP and comments on PMP. Revised PMP submitted on 20-08-2020. They have submitted the inception report on 02/09/2020.

Service for conducting Road Condition Surveys including traffic surveys, Trial pits, Core cutting and Axil load surveys on SH & MDR in the state of Kerala has been tendered on 28/10/2020. Bids were opened on 10-12-2020, Single bidder. Technical and Financial evaluations have completed.

Sl. No.	Name of Bidder	Nationality	Whether technical bid opened/ not opened	Remarks
1	M/S Velciti Consulting Engineers Private Limited	Indian	Opened	Single Entity

The work was awarded to M/s Velciti Consulting Engineers Pvt Ltd with Quoted price 64.79 Lakhs and mobilized. LoA has been issued to Bidder.

#### 5.18.4 E.Governances support for prices 2.0 Implementation:

The Chief Engineer, Roads & Bridges, and the Chief Engineer, Road Maintenance have submitted a note to KSTP for inclusion of e-Governance activities under ISAP (Institutional Strengthening Action Plan) of KSTP (Annexure 1) PWD has over 500 Section Offices, 190 Sub Division Offices, 50 Division Offices, 12 Circle Offices, and 7 Chief Engineer Offices State-wide. Even though computers and peripherals were supplied to these offices over the last 10 years, the number of computers provided was restricted due to budgetary constraints.

As evident from the above table, the IT infrastructures at various PWD offices are highly inadequate to cope up with the requirements for the implementation of the total e-Governance System.

In a PWD Division office where about 20 staff are required to work using a computer, we have provided only 10 to 12 computers on an average and many of them are in non-working condition now. The multifunction printer devices are allotted to Subdivision, Division, and Circle offices in the year 2010. PWD IT Cell has arranged an annual maintenance contract for these devices until December 2016. After that, the manufacturers have informed their inability to provide AMC support as the model is outdated. The Section offices of PWD are the most important unit of PWD in which all the projects are initiated and were executed. On average, infrastructure projects costing over 10 to 15 crores were executed through each Section office in every financial year. This was expected to increase further when the execution of KIIFB projects starts in full swing.

Apart from this, on the spot, M-Book preparation is envisaged in PRICE software which requires the provision of handheld tablets with internet connection facilities, one each for each Section Office of PWD. It is also proposed the online Rest house reservation and management software as part of WINGS up-gradation, which also requires providing necessary computer allied infrastructure in each rest house. The PRICE-2.0 and online Rest house reservations was proposed to be implemented from 1st April 2019.

Under KSTP-II, there is an allocation of US \$10 million (Rs. 70 Crores) in Component C (Institutional Strengthening) out of which Rs. 30.80 Crores is the State share. The World Bank's procurement procedure takes much time. When discussed with the World Bank, they informed that sole-sourcing KELTRON using Bank finance is not possible. As per the Government, order vide G.O.(Rt) No.25/2018/ITD dated, Thiruvananthapuram,01/02/2018, the Government accorded sanction for implementing a Centralized Procurement System in Government for the purchase of commonly used hardware items such as desktops, laptops, printers, scanners, etc. through an online Government portal (<http://cprcs.kerala.gov.in/>) developed for this (Annexure - 4).M/s KELTRON is entrusted as the service provider, who will derive rates for the commonly used IT equipments, through a competitive bidding process. As World Bank has expressed its unwillingness for single-source funding, it is proposed to procure the hardware using State funds as per the centralized procurement system of the Government of Kerala. The Budget estimate 2019-2020 has an allocation of

Rs.2.70 Crores under the head of account 5054-80-80-82 for e-Governance in PWD (Annexure -3). Its estimated cost of around 18.5 Cr was approved in the 106th Steering committee.

### 5.18.5 Post-Construction Technical Audit for Ongoing Work ( A1 & B Component)

The government of Kerala's intends to constitutes a "Technical Audit Committee" for reviewing the Output Deliverables of the Auditors and determine necessary actions, as may be required thereof, the need for further technical inspections and quality tests, if any, required and recommended by the Auditor shall be considered along with suitable funding arrangements made for the same either from the KSTP budget or elsewhere. These reports shall be made available 10th Aug (or The Technical Audit Committee" shall be headed by Secretary-PwD, KSTP-PD, and a senior-level representative from Finance Department The committee shall be staffed with technical specialists either from Research or Academic Institution 1 Bridge Expert 2. Pavement Expert and 3 a representative from KSDMA or Revenue Department Involved in the 2018 flood disaster assessment for Roads. Their remuneration of these experts shall be borne by KSTP

This Final Technical Audit Report under Section-IV Scope of Services as defined in TOR; to review the road sections or work packages which are yet to be taken over by the client. The technical audit is to determine the work packages have been constructed as per employer design & specifications, with suitable and approved materials during construction and necessary quality control procedures and workmanship have been ensured or not. And also, to critically analyse the construction machineries, laboratory arrangements, Calibration, test results, and their trends also be made on a sample basis. The technical audit findings are furnished below roads as explained in Section-I.2 of TOR.

<b>SI. No.</b>	<b>CONTRACT PACKAGE</b>	<b>NAME OF WORK</b>	<b>LENGTH (KM)</b>	<b>EXPECTED DATE OF COMPLETION/ STATUS</b>
1.	KSTP II/UG-1	Kasaragod – Kanhangad Road	27.78	March 2018
2.	KSTP II/UG-2	Pilathara – Pappinisery Road	20.90	March 2018
3.	KSTP II/UG-3A	Thalassery – Kalaroad	30.00	March 2019
4.	KSTP II/UG-3B	Kalaroad to Valavupara	24.00	March 2019
5.	KSTP II/UG-4	Chengannur – Eattumanoor Road	47.70	Completed (Under Defect Liability Period)
6.	KSTP II/UG-5	Eattumanoor – Muvattupuzha Road	40.96	Completed (Under Defect Liability Period)

A copy of each report deliverable of Technical Audit along with Records of Discussions of "Technical Audit Committee" meetings shall be made available to the World Bank's TTL for review, as soon as it is received.

M/s HAKS Engineers, Architects & Land Surveyors PC in JV with M/s Info Trans Engineers Pvt Ltd and M./s ECORYS NEDERLANDS Bv has been awarded a contract on 07.03.2019. The Cost of a Tender is 1.64 Cr in 2 Phases.

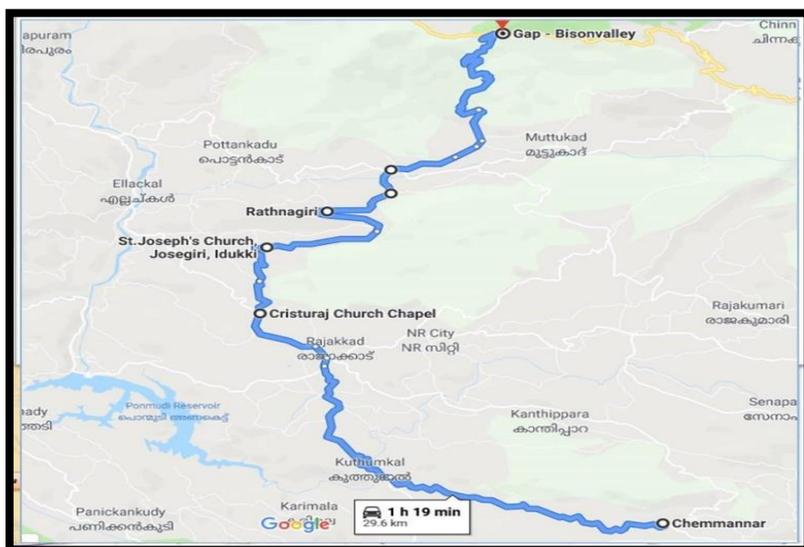
**Status:** HAKS Engineer has submitted the final technical audit report on 13-10-2020. The report was checked and no anomalies found with respect to Quality in any roads. Minor safety measures and Long term maintenance aspects were stressed which is being taken up by KSTP through the Division

## 5.19 Component D: Rebuild Kerala Initiative

KSTP has entrusted the Prioritization of the roads to be taken up under RKI to M/s LNTIEL, who are the Transaction Advisors for KSTP. Fifty-nine roads were identified under the RKI component by the PWD Divisions based on the flood damage and severity.

Sl. No.	Category	Contract Package	Name of Work	Length (Km)	Construction Period	Maintenance Period
1	Category B	KSTP-II/PMT/RKI-2	Chemmannar Gap road	29.94	12 Months	60 Months
		KSTP-II/PMT/RKI-3	Painavu-Thannikandom-Asoakkavala road	21.0		
		KSTP-II/PMT/RKI-4	Adoor- Chengannur	23.80		

### 5.19.1 RKI-2\_Chemmanar Gap Road Status



<b>Project Name</b>	Upgrading Chemmanar -Gap Bisonvalley (RKI 2)) Package: Km 0+000 (Chemmannar) to Km 29+935 (Gap Bisonvalley)
<b>Length of the Road</b>	29.935 Km
<b>Name of Contractor</b>	M/s DRAIPL – GREENWORTH (JV)
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	03.08.2020
<b>Date of Award (LOA Date)</b>	07.05.2020
<b>Appointed Date</b>	18.08.2020
<b>Construction Period (in Months)</b>	12 Months
<b>Maintenance Period (in Months)</b>	60

<b>Scheduled Date of Completion</b>	17.08.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>Chainage of the Project (in Km)</b>	km 0.000 to 29.935
<b>Total Project Cost (in Cr)</b>	146.67

Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan-2021)	Financial Progress in % (Jan-2021)
M/s.DRAIPL-GREENWORTH(JV)	17.08.2021	146.67	1.05 %	1.9 %
Date of commencement	EOT-Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of Jan-2021 (Net Amount)
03.10.2020				2.93 Cr

The price quoted by the lowest evaluated responsive bidder, M/s DRAIPL – Greenworth (JV) is Rs.146.67 Cr, which is 14.99% more than the estimated cost of Rs. 127.55 Cr may be accepted & awarded considering the fact that this is a 2<sup>nd</sup> re-tender, and the work being an EPC contract, to be executed in a **hilly terrain** with five years maintenance period, retendering again may not yield a better offer. LoA was issued to the Contractor on 07-05-2020 but the Contractor has asked for EOT for the Appointed date. The agreement was executed on 3<sup>rd</sup> Aug-2020.

**Milestone**

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date	
Milestone I	145	20 %	10.01.2021			Work programme not submitted
Milestone II	220	55 %	26.03.2021			
Milestone III	295	75 %	09.06.2021			
Scheduled Completion	365	100 %	18.08.2021			

**Physical Progress ( Progress till Jan-2021 is 1.05%)**

Item	Stage for Payment		SCHEDULE – H			Component wise - Physical Progress (%)		
			Weight age in % to the Contract Price	Contract Price	% Weightage to Particular	% Progress Up to date	During Current Month	Up to previous month
1	2		3	4	5			
Road works including culverts, Minor Bridges, underpasses, approaches to Major Bridges/Structures (but excluding service roads)	<b>A</b>	<b>Widening and strengthening of existing road</b>	43.37 %	63,61,18,633			2.405	2.405
	1	Earthwork up to top of sub-grade			3.61%			
	2	Rock cutting			15.69%	2.405		
	3	Granular Work (sub-base, base, shoulders)			26.94%			
	4	Bituminous work			37.75%			
	5	Paver Block			0.00%			
	6	Widening and repair of culverts			1.46%			
	7	Widening and repair of minor bridges			3.66%			
	<b>B</b>	<b>New 2-lane realignment / bypass</b>						
	1	Earthwork up to top of sub-grade			0.00%			
	2	Rock cutting			0.00%			
	3	Granular Work (sub-base, base, shoulders)			0.00%			
	4	Bituminous work			0.00%			
	5	Paver Block			0.00%			
	<b>C</b>	<b>New Culverts, minor bridges, under passes, over passes on existing road, realignments, bypasses:</b>						
	1	Culverts			1.04%			
	2	Minor Bridges			0.00%			
	<b>D</b>	<b>Reconstruction of culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:</b>						
	1	Culverts			9.85%			
	2	Minor Bridges			0.00%			
	<b>Sub Total A</b>				<b>100.000%</b>			
Major Bridge works, Underpasses, overpasses, and ROB/RUB	A	Widening and repairs of major bridges	0.00%	-				
	1)	Foundation			0.00%			
	2)	Substructure			0.00%			
	3)	Superstructure (including crash barriers etc. complete)			0.00%			
	<b>Sub Total B</b>				<b>0.000%</b>			

Other works	i)	Service roads	56.63%	83,06,06,368	0.00%			
	ii)	Toll Plaza			0.00%			
	iii)	Road side drains			18.88%			
	iv)	Road signs, markings, km stones, safety devices, Road Appurtenances			9.37%			
	v)	Project facilities			0.00%			
	a)	Bus Bye			0.00%			
	b)	Bus Shelter			1.20%			
	c)	Truck lay bye			0.00%			
	d)	Turfing, Kerb, W' Metal Beam Crash Barrier, Pedestrian Guard Rails			28.52%			
	vi)	Repairs to bridges/structures			0.00%			
	a)	Providing wearing coat			0.00%			
	b)	Replacement of bearings, joints			0.00%			
	c)	Providing crash barriers			0.00%			
	d)	Other items			0.00%			
	vii)	Repair of protection works			0.00%			
	vii i)	Safety and traffic management during construction			0.02%			
	ix)	Junctions			0.98%			
x)	Retaining wall	24.50%						
xi)	Footpath, Utility culverts, utility ducts, Roadside Lighting, site clearance, and General Items	10.56%						
xii)	EMP Works and Monitoring of Environment Attributes, ESHS requirement.	5.97%						
		<b>Sub Total C</b>			<b>100.000%</b>			
		<b>Total Amount (A+B+C) =</b>	<b>100.00 %</b>	<b>1,46,67,25,000</b>			<b>1.05</b>	<b>1.05</b>

Sl. No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
	<b>Road works</b>					
1	Exc upto SG Top	29.935				Work in progress
2	Rock cutting	29.935	4.600	4.600	25.335	Work in progress
3	GSB	29.935				Work in progress
4	WMM	29.935				Not yet Started
5	DBM	29.935				Not yet Started
6	BC	29.935				Not yet Started
	<b>Structure works</b>					
1	Reconstruction/New Construction of Box culverts	38				Not yet Started

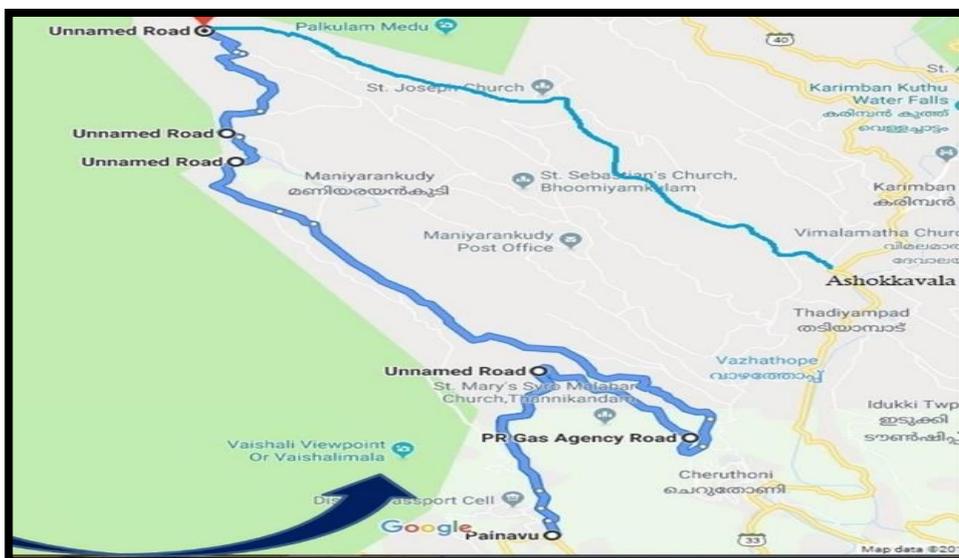
2	Repair and Rehabilitation of Slab Culverts	18				Not yet Started
3	Widening of Slab Culverts	3				Not yet Started
4	Retaining Wall Length (in Mts)	2.891 Km				Not yet Started
5	Gabion Wall Length (in Mts)	0.952 Km				Not yet Started

Up to end of previous Month (December-2020)		This Month (January-2021)		Cumulative to end of this Month (January-2021)	
Target	Achieved	Target	Achieved	Target	Achieved
-	-	-	1.533 Cr (1.05 %)	-	1.533 Cr (1.05 %)

**Current issues (Jan -2021)**

- Delay in Mix Design for GSB, WMM
- Delay in Mix Design for DBM/BC
- Delay in Mix Design for Concrete works
- Delay in GAD/Working Drawings submission.
- Delay in Submission of Plan and profile drawings
- Estimates of Water pipe line and External parts
- Slow progress of works.
- Delay in Mobilization of Key persons.
- Status of works not informing to Authority.

**5.19.2 RKI-3\_Painavu-Thannikandom-Ashokkavala Status**



The bid invitation was published on 15.08.19 with the date of the bid submission date as 17.09.19 which was extended up to 04.10.19. Only one bid was received for this package from bidders, the details are as per below.

On the evaluation of the technical bids by the evaluation committee, the above Single bid received from M/s EKK Infrastructure limited were found responsive to the requirements of the bidding documents and were recommended to be invited for the opening of their price bids for further evaluation. Accordingly, the Financial Bids of this one firm were opened on 25.10.19 and scrutinized. The Bid price quoted by M/s EKK Infrastructure Ltd was Rs.95.40 Cr. The price quoted by the bidder is Rs.95.40 Cr against the estimated cost of Rs.86.82 Cr. This is 9.88% above the estimated amount. The evaluation report was sent to the Steering committee for approval and the same has been approved by the committee. LOA Issued to the contractor. The agreement was signed on 24-01-2020 and the construction period is 12 months from the Appointed date and work is in progress as below.

**Progress of Work**

<b>Project Name</b>	Upgrading Painavu –Asokawalaroad (RKI 3)) Package: Km 0+000 (Painavu) to Km 21+000 (Asokawala)
<b>Length of the Road</b>	21.000 Km
<b>Name of Contractor</b>	M/s EKK Infrastructure Ltd
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	24.01.2020
<b>Date of Award (LOA Date)</b>	22.11.2019
<b>Appointed Date</b>	30.04-2020
<b>Construction Period (in Months)</b>	12 Months
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	29.04.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>Chainage of the Project (in Km)</b>	km 0.000 to 21.000
<b>Total Project Cost (in Cr)</b>	95.40

Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan -2021)	Financial Progres in % (Jan -2021)
M/s EKK Infrastructure Ltd	29.04.2021	95.40	11.13 %	1.90 %
<b>Date of commencement</b>	<b>EOT-Approved</b>	<b>Variation Order Value in crores</b>	<b>Anticipated Revised Project Cost</b>	<b>Billed Amount made till end of Jan -2021 (Net Amount)</b>
30.04-2020				1.90 Cr

The financial progress is 1.90% ( Mobilisation Advance paid)

**Milestones**

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Current Status	Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date		
Milestone I	145	20%	22.09.2020	11.133			Contractor Submitted EOT - 1 and the same reviewed and recommended to the Authority for approval on 15.12.2020
Milestone II	220	55%	06.12.2020				
Milestone III	295	75%	19.02.2021				
Scheduled Completion	365	100%	29.04.2021				

**Physical Progress( Till January 2021 is 11.13%)**

Component	Weightage %	Sub Component wise progress during the month			Component wise -Physical Progress (%)		
		Sub Component	% Weightage	% Progress	During Current Month	Up to previous month	Cumulative , Up to Current Month
Road works	48.86%	<b>Widening and strengthening of existing road</b>			5.912		5.912
		Earthwork up to top of sub-grade	3.090%				
		Rock cutting	12.680%	10.869			
		Granular Work (sub-base, base, shoulders)					
		GSB ( 43%)	9.980%				
		WMM (53%)	12.310%				
		Shoulder (4%)	0.930%				
		Bituminous work					
		DBM (43%)	14.970%				
		BC (57%)	19.850%				
		Paver Block					
		Widening and repair of culverts	0.710%				
		<b>New Culverts, minor bridges, under passes, over passes on existing road, realignments, bypasses:</b>					
Culverts	5.790%						

Other works		<b>Reconstruction of culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:</b>					
		Culverts	19.690%	<b>1.231</b>			
	51.14%	Road side drains	15.140%			<b>5.221</b>	<b>5.221</b>
		Road signs, markings, km stones, safety devices, Road Appurtenances					
		Road signs	0.691%				
		Road markings	1.118%				
		Km stone	0.280%				
		Safety Devices, Road Appurtenances	6.111%				
		Project facilities					
		Bus Bay	0.460%				
		Bus Shelter					
		Turfing, Kerb, W' Metal Beam Crash Barrier, Pedestrian Guard Rails					
		a) W metal beam crash barrier	23.380%				
		b) Kerb	5.030%				
		c)Turfing	0.620%				
		d)Pedestrian Guardrails					
		Safety and traffic management during construction	0.030%				
		Junctions	8.980%				
		<b>Retaining wall</b>					
		<b>Toe wall / Gabion wall / Retaining wall</b>	17.438%	<b>4.104</b>			
		<b>Rehabilitation measures at land slide locations</b>	5.812%				
		Footpath, Utility culverts, utility ducts, Roadside Lighting, site clearance, and General Items					
		a) Footpath					
		b) Utility Ducts	0.251%				
		c) Site clearance	1.489%	<b>1.489</b>			
		d) Roadside Lighting	5.810%				
		e) General Items - QC Laboratory	0.550%	<b>0.550</b>			
		f) Saplings	0.200%				
		EMP Works and Monitoring of Environment Attributes, ESHS requirement.	6.610%	<b>3.305</b>			
			<b>Sub Total C</b>	<b>100.000%</b>	<b>-</b>		
	<b>100.00%</b>	<b>Total Amount (A+B+C) =</b>				<b>11.133</b>	

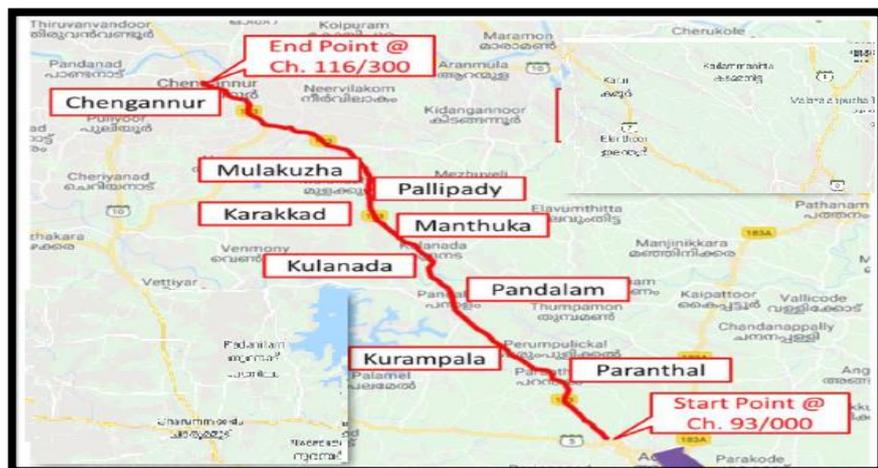
Sl.No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
<b>Road works</b>						
1	Exc upto SG Top	21.00			21	Not yet Started
2	Rock cutting	21.00	3	18	3	Work in progress
3	GSB	21.00			21	Not yet Started
4	WMM	21.00			21	Not yet Started
5	DBM	21.00			21	Not yet Started
6	BC	21.00			21	Not yet Started
<b>Structure works</b>						
1	Culverts	66 Nos.	2	3	63	Work in progress
2	Toe wall /Gabion, RCC Retaining wall	786	11	185	601	Work in progress

Up to end of previous Month		This Month		Cumulative to end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
16.035 Cr (16.808%)	9.932 Cr (10.410 %)	11.554 Cr (12.110 %)	0.689 Cr (0.722 %)	27.589 Cr (28.919 %)	10.621 Cr (11.133 %)

**Current Issues ( Jan - 2021)**

- Revised Work Programme not submitted by the Contractor.
- Applicable permits are also not submitted by the contractor till date.
- Slow Progress of works due to poor planning.
- Delay in submission of Design & Drawings.
- Utility shifting work obstructing the progress of works

**5.19.3 RKI- 4 - Adoor – Chengannur Road Status**



The bid invitation was published on 15.08.19 with the date of the bid submission date as 17.09.19 which was extended up to 04.10.19. Only one bid was received for this package from bidders, the details are as per below.

On the evaluation of the technical bids by the evaluation committee, the above Single bid received from M/s EKK Infrastructure limited were found responsive to the requirements of the bidding documents and were recommended to be invited for the opening of their price bids for further evaluation. Accordingly, the Financial Bids of this one firm were opened on 25.10.19 and scrutinized. The Bid price quoted by M/s EKK Infrastructure Ltd was Rs.98.10 Cr. The price quoted by the bidder is Rs.98.10 Cr against the estimated cost of Rs.93.59 Cr. This is 4.82% above the estimated amount. The evaluation report was placed before the Steering committee approval and the same has been approved by the committee. LOA Issued to the contractor. The agreement was signed on 24-01-2020 and the construction period is 12 months from the Appointed date. LoA has been issued to the Contractor on 07.05.2020. Work is in progress as per table below.

**Progress of Work**

<b>Project Name</b>	Upgrading Adoor- Chenganoorroad (RKI 4)) Package: Km 0+000 (Adoor) to Km 23+800 (Chenganoor)
<b>Length of the Road</b>	23.800 Km
<b>Name of Contractor</b>	M/s EKK Infrastructure Ltd
<b>Type of Contract</b>	Engineering, Procurement, Construction (“EPC”)
<b>Agreement No &amp; Date</b>	24.01.2020
<b>Date of Award (LOA Date)</b>	22.11.2019
<b>Appointed Date</b>	30.03-2020
<b>Construction Period (in Months)</b>	12 Months
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	29.03.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>Chainage of the Project (in Km)</b>	km 0.000 to 23.800
<b>Total Project Cost (in Cr)</b>	98.10

Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Jan-2021)	Financial Progress in % (Jan-2021)
M/s EKK Infrastructure Ltd	29.03.2021	98.10	33.07 %	7.68 %
Date of commencement	EOT-Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of Jan-2021 (Net Amount)

30.03-2020				7.54 Cr
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**Milestones**

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Current Status	Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date		
Milestone I	145	20%	22.08.2020	20%		MS-01 Achieved	Contractor submitted the EOT-1 and the same reviewed and recommended to the Authority for approval on 15.12.2020
Milestone II	220.	55%	05.11.2020	33.071%			
Milestone III	295	75%	19.01.2021				
Scheduled Completion	365	100%	29.03.2021				

**Physical Progress**

Physical Progress till Jan-2021 is 33.07 %

SSI No	Item	Scope	Work done in this month	Cumulative progress	Balance work	Remarks
	<b>Road works</b>					
1	Exc upto SG Top	0.815	0	0.670	0.145	Work in progress
2	GSB	6.455	0.650	3.620	2.835	Work in progress
3	WMM	6.455	0.650	3.620	2.835	Work in progress
4	DBM	6.455	0.650	3.562	2.893	Work in progress
5	BC	23.80	3.00	6.030	17.77	Work in progress
	<b>Structure works</b>					
1	Culverts	44 Nos.	6	26 Nos.	18	Work in progress
2	Repairs & Rehabilitation of Culverts	20		20		Completed
3	RCC Drain ((Pre-Cast & Cast-in situ)	3000 m	510	890	2110	work in progress
4	Toe wall /Gabion, RCC Retaining wall	1140		371	769	work in progress
5	Footpath	10369m	1833	7761	2608	work in progress
6	MB Crashbarrier	6700 km		1573	5127	work in progress

Item	Weightage in % to the Contract Price	Contract Price	Sub Component wise progress during the month				Component wise -Physical Progress (%)								
				Sub Component	% Weightage to Particular as per Proposed	%Progress	During Current Month	Up to previous month	Cumulative, Up to Current Month						
Road works including culverts, Minor Bridges, underpasses, overpasses, approaches to Major Bridges/Structures (but excluding service roads)	53.45%	52,43,44,500	<b>A</b>	<b>Widening and strengthening of existing road</b>			<b>8.752</b>	<b>14.323</b>	<b>23.075</b>						
			1	Earthwork up to top of sub-grade	1.60%	1.323									
			2	Rock cutting											
			3	Granular Work (sub-base, base, shoulders)											
				GSB (44%)	6.252%	3.523									
				WMM (54%)	7.670%	4.324									
				Shoulder (2%)	0.288%										
			4	Bituminous work											
				DBM (21.33%)	13.26%	7.351									
				BC (78.67%)	48.90%	12.449									
			5	Paver Block											
			6	Widening and repair of culverts	1.93%	1.93									
			7	Widening and repair of minor bridges											
			<b>B</b>	<b>New 2-lane realignment / bypass</b>											
			1	Earthwork up to top of sub-grade											
			2	Rock cutting											
			3	Granular Work (sub-base, base, shoulders)											
			4	Bituminous work											
			5	Paver Block											
			<b>C</b>	<b>New Culverts, minor bridges, under passes, over passes on existing road, realignments, bypasses:</b>											
			1	Culverts	2.11%										
			2	Minor Bridges											
			<b>D</b>	<b>Reconstruction of culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:</b>											
			1	Culverts											
				Cast-in-Situ (Culverts)	3.60%	0.675									
				Pre-Cast (Culverts)											
				Casting of Culverts (80%)	11.51%	9.450									
				Laying of Culverts (20%)	2.88%	2.143									
			2	Minor Bridges											
				<b>Sub Total A</b>		<b>100.000 %</b>									
			Major Bridge works,	0.00%	-	A				Widening and repairs of major bridges					

Underpasses, overpasses, and ROB/RUB			1)	Foundation					
			2)	Substructure					
			3)	Superstructure (including crash barriers etc. complete)					
			4)	Protection Work					
			<b>Sub Total B</b>						
Other works	46.55%	45,66,55,500	i)	Service roads			<b>0.955</b>	<b>9.039</b>	<b>9.994</b>
			ii)	Toll Plaza					
			iii)	Road side drains					
				Casting of Drain (80%)	26.96%	8.004			
				Laying of Drain (20)	6.74%	2.001			
			iv)	Road signs, markings, km stones, safety devices, Road Appurtenances					
				Road signs	2.430%				
				Road markings	2.460%				
				Km stone	0.032%				
				Safety Devices, Road Appurtenances	1.638%				
			v)	Project facilities					
			a)	Bus Bye	0.48%				
			b)	Bus Shelter	0.13%				
			c)	Truck lay bye					
			d)	Turfing, Kerb, W' Metal Beam Crash Barrier, Pedestrian Guard Rails					
				a) W metal beam crash barrier	6.71%	1.575			
				b) Pedestrian Guard Rails	8.72%	0.265			
				c) Kerb	3.52%	1.420			
			vi)	Repairs to bridges/structures					
			a)	Providing wearing coat					
			b)	Replacement of bearings, joints					
			c)	Providing crash barriers					
			d)	Other items					
			vii)	Repair of protection works					
			viii)	Safety and traffic management during construction					
			ix)	Junctions	5.79%				
x)	Retaining wall	13.07%	4.253						
xi)	Footpath, Utility culverts, utility ducts, Roadside Lighting, site clearance, and General Items								
	a) Footpath	8.99%	3.364						
	d) Roadside Lighting	4.79%							
	e) General Items - QC Laboratory	0.55%	0.55						
	EMP Works and Monitoring of Environment Attributes, ESHS requirement.	6.99%	0.035						
	xii)								
			<b>100.000 %</b>					<b>33.07</b>	

Up to end of previous Month		This Month		Cumulative to end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
25.00 Cr (25.484%)	22.917Cr (23.362 %)	15.00 Cr (15.290%)	9.525 Cr (9.709 %)	40.00 Cr (40.775%)	32.442 Cr (33.071 %)

### Current issues (Jan-2021)

- Revised Work Programme not submitted.
- Slow progress of work due to poor planning.
- Contractor not submitting the GAD/Working Drawings
- Delay in utility shifting.
- culvert works are getting delay due to shifting of BSNL and other utilities shifting
- Contractor has stopped the work at Chenganur side 8km stretch due to the instructions from the MLA ,Chenganur.

### 5.19.4 Other Procurement Details in Progress as:

SL. No	Procurement details/ Name	Description	Work Details	Status
1	OPBRC Works	Package- 01 Chengannur- Angamaly	Maintenance work period of 7 years. Funded by GoK. It was tendered on 27-07-2020. The bid opening date is 27-08-2020, Estimated Value of package is 69.42Cr.The total length of the package is 107.75 km	It is in Retendering stage, Revised RFE is in Progress.
		Package- 02 Ponkunnam - Thodupuzha, vattavada- top station, Munnar from Top station to Munnar in kottayam	Retender Bid was uploaded on 21/01/2021, Bid Submission was 22/02/2021, Estimated Value 68.60 Cr. The total length of the package is 89.81 km	It is under Procurement stage
		Package - 03 - Kollam Ayoor, Kayamkulam- Mavelikkara- Thiruvalla, K P Road	Retender Bid was uploaded on 27/01/2021, Bid Submission was 22/01/2021, Estimated	It is under Procurement stage

		from Kayamkulam to Adoor, Thrikkunnipuzha-Thattarambalam, PandalamKaipattoor in Kollam, Alappuzha, Pathanamthitta	Value 60.12 Cr. The total length of the package is 86.254 km	
		Package- 04, Cherkala-Jaloor, Kuttiyadi-Kellur, Sultan Bathery-Pulpally-Perikkallur Road Districts	Bid was uploaded on 27.08.2020, Bid Submission was 30.09.2020, Estimated Value 82.30 Cr. The total length of the package is 97.138 km	No Bids Received , It is in Retendering stage, Revised RFE is in Progress
2	Four CSC to be selected for RKI Supervision works. EOI for shortlisting in progress.	AE-1	Consist of 4 roads of Pkg-II was tendered for selected Consultants & Received 5 Bids is under evaluation stage, Bid Uploaded on 06-07-2020 Last date of submission on 06-08-2020.	M/s Egis - Orion (JV)consulting Pvt Ltd was awarded with contract price 11.87 cr. Agreement was executed on 28/10/2020
		AE-2	Tender uploaded on 11-08-2020, Last date of submission on 23-09-2020, AE-2 consists of 6 roads of Pkg-I & Pkg-II has been Tendered. 10 Bids were received	M/s MSV (JV) Associates Engineering Pvt Ltd was awarded with contract price 9.48 Cr
		CSC-1 for PKg-III RKI	EOI Stage	Pre-qualification stage
		CSC-2 for Pkg-IV RKI	EOI Stage	
3	AC road/ Upgradation of Alappuzha-Changanssery road into Semi Elevated Highway	Upgradation of Alappuzha-Changanssery road into Semi Elevated Highway Work	Tender uploaded on 14-08-2020, Last date of submission on 07-09-2020, Estimated cost- 610.25 Cr	Three Bids were received, 1) M/s RDD-CVCC(JV), 2) M/s ULCCS-EVRASCON(JV), 3) M/s Marymatha- KMC(JV). M/s ULCCS- EVRASCON(JV) was awarded, Agreement executed on 27/10/2020 was awarded with 679.0 Cr ,Site Inventory Details submitted on 30/12/2020

		AE for AC road	Bid uploaded on 16-09-2020, Last date of submission on 16-10-2020	11 bids were received, Procurement stage have completed, Technical evaluation result has uploaded. Financial bid opened on Dec 2020 and M/s. Voyants in Jv with TASPL in association with AIPPL is the L1, LOA to be issued. It was awarded with 7.06cr contract price.
4	Vulnerability Assessment	-	EOI Stage	EOI bids Received & RFP to prepare and Final ToR under progress. Evaluation report preparation under progress
5	Skywalk ( <i>This work is Not under World Bank</i> )	Proposed timeline for development of Sky walk-in Thiruvananthapuram	Agreement signed with Arkitechno Consultants (India) Pvt. Ltd. In JV with M/s Design Forum International on 07-09-2020	ARKITECHNO in JV with DESIGN FORUM has been Awarded with the highest score. LoA has been issued to Bidder on 28.07. 2020. Executed Agreement on 07-09-2020 . They have submitted an inception report and alignment report. The preliminary survey under progress and finalization of alignment under steering Committee
6	WSA ( <i>This work is Not under World Bank</i> )	WSA -I	Establishing, Operating and Maintaining wayside amenities on land leased out by KSTP/ PWD under BOT Mode (Build, Operate, Transfer)	HPCL is the only bidder. The draft Lease Agreement submitted to Govt. for getting approval of Revenue/ Finance department cabinet approval
		WSA -II		Under the procurement stage, Tender uploaded 14/10/2020, Last submission date is 11/11/2020. No Bids Received after retendering
		WSA-III	O & M contract on Lease – Vazhiyora Vismra Kendram	Procurement stage

## 5.20 RKI FLOOD WORKS KFW LOAN & WORLD BANK LOAN

During the 2018 natural disaster, most of the roads built under the World Bank-funded KSTP Phase I and II (Kerala State Transport Project) performed well and suffered only limited damage. Engineers of the Public Works Division (PWD) believe that this is primarily due to the enhanced design standards, climate-proofing specifications, and enhanced supervision developed and implemented within the Project. Hence, PWD is now considering developing a more sustainable and climate-resilient asset stock in the medium to long term (especially during the planned rehabilitation of affected road infrastructure).

The Government of Germany pledged to support the Government of Kerala in its rebuilding efforts with due attention to “building back better” principles, by providing via KfW: a) Two interest-reduced loans of up to EUR 170 million for climate-resilient reconstruction of flood-affected roads and bridges; and b) A grant of EUR 3 million for an accompanying measure to provide project-related capacity building and institutional strengthening. The GoK has committed to provide an own contribution of 30 % (EUR 51 million) of the total costs of the project, raising the total financing volume of this Project to EUR 221 million. Loan agreements were signed in November 2019 by KfW and the GoK. Also, the World Bank sanctioned two Development Policy Operations (DPOs) totaling to US\$250 million in May 2019 with an objective to mainstream disaster risks and climate change impacts information across the State’s key areas of development including the roads sector. Part of this budget will finance the present program.

The approval was given by the Steering Committee in the 108<sup>th</sup> MOM dated 17-09-2019. KSTP has hired 4 consultancy firms, one for each cluster, to produce Detailed Project Reports (DPR) including detailed designs, draft tender documents, and Environmental and Social Impact Assessment (ESIA). Reports were expected to be finalized in April 2020. Based on the DPR a final list of roads has drawn up to be financed by the KfW programme for Central and South areas and by KSTP for the North area. M/s. Egis has signed the agreement of Package -01, 02 & 03 on 17.10.19 and Package-04 on 30.10.19.

### **Deliverables**

The study will come up with the Detailed Project Report and Drawings for the redevelopment of the road under the item rate contract. The following will be the deliverables for the proposed assignment

- Submission of Inception Report – within 15 days of receipt of work order.
- Submission of Survey and Investigation Report – within 2 months of receipt of work order.
- Submission of pilot DPR (incl. ESIA and ESMP) and Bidding Documents – for one road within 3 months of receipt of work order.
- Submission of Draft DPR (incl. ESIA and ESMP) and Bidding Documents– within 5 months of receipt of work order
- Submission of Final DPR (incl. ESIA and ESMP) and Bidding Documents – Within 6months of receipt of work order.

The formal submissions will be reviewed and commented on by KSPT together with PMC and KfW. Consultants shall also generally keep KSTP/PMC informed on and seek approvals for any specific design recommendations to be incorporated in the final detailed designs. KSTP shall also be informed immediately of any new data, factors, or events which might significantly affect the viability or selection of a particular project road.

#### **5.20.1 RKI Package 1**

**M/s Feedback Infra Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below:

- All the roads have been tendered.
- 3 Roads has been awarded & Agreement executed & under Inventory survey & Design in progress
- Other 2 Roads LoA has been issued.
- More Details mentioned in Below Table of Status of Package 1

#### **5.20.2 RKI Package 2**

**M/s LNTIEL** has submitted the Inception report as per the deliverables schedule. It has been agreed to standardize the submissions of all the DPR’s to avoid differences in implementation. PMC will be coordinating these Consultants and

prepare a **DBR (Design Basis Report)** to World Bank and on further concurrence, the same shall be communicated to the DPR consultants. Emphasis on Climate Resilient Roads incorporating Geo Tech and Hydrology will be a crucial part of the reports to ensure durability and connectivity in severe conditions. The Status of RKI roads mentioned below.

- All roads have been awarded.
- 5 roads Have been tendered in July.
- All Roads has been awarded & Agreement executed in Montgh of October-2020
- All Roads under Survey Inventory & Design in progress.
- More Details mentioned in Below Table of Status of Package 2

### 5.20.3 RKI Package 3

**M/s Louis Berger Consulting Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below:

LBI has submitted DDPR's of all the roads. However, since these roads are co-financed by KfW. Pilot DPR's of two roads has been reviewed by KfW and resubmission based on these

Comments are expected shortly. The other DPR's shall follow pilot DPR's and hence minimize reviewing all DPR's for the same issues.

- 7 Roads have been tendered & 1 Roads is in Final Stage of Procurement.
- 2 Roads are in Reserve Forest issues from KfW.
- More Details mentioned in Below Table of Status of Package 3

### 5.20.4 RKI Package 4

**M/s Egis India Consulting Engineers Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below.

EGIS has submitted DDPR's of all the roads except one road in Ranni District, which was awarded as an additional work in January 2020. However, since these roads are co-financed by KfW Pilot DPR's of Road No 4, has been reviewed by KfW, and resubmission based on these comments is expected shortly. The other DPR's shall follow pilot DPR's and hence minimize reviewing all DPR's for the same issues.

- ✓ 7 Roads have been tendered & 2 other roads are in Final Stage of Procurement.
- ✓ Road 2 has been Retender due to high Quote.
- ✓ More Details mentioned in Below Table of Status of Package-4

### Status of Package-I

#### PKG -I, M/s FEEDBACK

Road No.	RKI-11	RKI-12	RKI-13	RKI-14	RKI-15
Road Name	Edoor – Companynirath - Anapanthy - Angadikkadavu– Vaniyappara - Charal - Valavupara - Kacherikkadavu - Palathumkadav road in Peravoor constituency	Uruvachal Manakkayi valayal -Keezhallur Therur Palayod-Vellaparamba Karimbala Colony Maruthaayi Road	Kumbla- Badiadka-Mulleria road	Koyilandy Thamrassery Mukkam Areekode Edavanna	Vythiri-Tharuvana road
District	Kannur	Kannur	Kasargod	Kozhikode	Wayanad
Length as per ToR (km)	24.45	20.43	29.55	52.50	20.75
Length of Road as per actual site (km)	24.40	18.46	29.135	46.32	13.32
Category of Road	MDR	MDR	MDR	SH-34	MDR
<b>Status</b>					
Submitted	✓	✓	✓	✓	✓
Estimated Cost in Cr (Excluding maintenance)	127.35	96.31	151.74	212.74	61.15
Bids Received	2 (RDS & Ekk)	2 bids( RDS & EPI)	2 bids ( RDS & Eagle)	4 Bids ( Sreedanya, CVCC, EPI & ULCC)	4 Bids ( PMR CC, Malabar tech constrction , ULCC & Mid Land Engineering
Awarded Cost in Cr	128.43	100.42	158.44	221.06	66.52
Evaluation	Done	Done	Done	Done	Done
Awarded	RDS	EPI	RDS	Sreedanya (L1)	PMR CC (L1)
Approved by SC	✓	✓	✓	Not Yet	Not Yet
LoA issued	✓	✓	✓	Not Yet	Not Yet
Status	Agreement executed with M/s RDS Project Ltd. on 28.10.2020. Invenory survey and design works are in progress.	Agreement executed with M/s EPIL on 14/12/2020,Invenory survey and design works are in progress.	Agreement executed with M/s RDS on 14/12/2020,Invenory survey and design works are in progress.	LoA issued	LoA issued

### Status of Package-II

PKG -II, M/s L & T						
Road No.	RKI-05	RKI-06	RKI-07	RKI-08	RKI-10	
Road Name	Perumbilavu-Nilambur Road	Quilandy - Edavanna road	Palakkad -Perinthalmanna Road	Thavalam Mully Road	Mananthavady – Vimalnagar – Kulathada – Valad HS – Periya road	
District	Malappuram	Malappuram	Palakkad	Palakkad	Wayanad	
Length as per ToR (km)	24.4	32.5	36.8	28.8	24.8	
Length of Road as per actual site (km)	30.88	31.53	37.38	28.50	27.00	
Category of Road	SH-39	SH-34/MDR	SH-53	MDR	MDR	
Status						
Submitted	✓	✓	✓	✓	✓	
Estimated Cost in Cr (Excluding maintenance)	132.76	157.40	355.68	116.11	89.54	
Awarded Cost in Cr	144.00	189.76	323.10	132.81	102.83	
Awarded	M/s KMC Constrcutions	M/ s Shreedanya Construction Company	M/s KMC Constrcutions	M/s Akshaya Builders-EKK JV	M/s ULCC	
Approved by SC	✓	✓	✓	✓	✓	
LoA issued	✓	✓	✓	✓	✓	
Status	Agreement executed on 07-10-2020, Invenory survey and design works are in progress.	Agreement executed with M/s Sreedhanya Construction company on 08/10/2020. Invenory survey and design works are in progress.	Agreement executed with M/s KMC Constructions Ltd on 13/11/2020, Invenory survey and design works are in progress.	Agreement executed on 28-10-2020, Invenory survey and design works are in progress.	Agreement executed with M/s ULCCS on 28.10.2020. Invenory survey and design works are in progress.	

### Status of Pkg-III

#### PKG -III, M/s LBI

Road No.	1	2	3	4	5	6	7	8	9	10, Additional scope
Road Name	Mookannoor Ezhattumugham road and Blachippara Palissery road	Kakkadassery - Kaliyar road	Muvattupuzha - Theni (SH-43) road	Kumarakom-Nedumbassery road (proposed SH)	Neyyassery-Thokkumbansaddle road	Nenmara - Nelliampathy road	Kodungallur- shornur (SH-22) road	Vazhakkodu-Plazhy (SH-74) road	Thrissur Kuttippuram road (SH 69)	Arakunnam-Amballoor-Poothatta-Piravam Road
District	Ernakulam	Ernakulam	Ernakulam	Ernakulam	Idukki	Palakkad	Thrissur	Thrissur	Thrissur	Thrissur
Length as per ToR (km)	20.30	20.60	15.75	21.03	28.50	30.71	34.00	22.64	29.98	7.00
Length of Road as per actual site (km)	19.95	20.176	16.18	21.40	31.916	30.47	34.35	22.72	33.00	7.98
Category of Road	MDR	MDR	SH	MDR	MDR	MDR	SH	SH	SH	MDR
<b>Status</b>										
Estimated Cost in Cr	₹ 91.89	₹ 67.74	₹ 80.91	₹ 96.85	₹ 133.60	₹ 90.66	₹ 194.96	₹ 92.52	₹ 212.81	₹ 27.74
Opening Date of Bids	4 Bids ( Antech-RBL JV, SPL-AF JV, Marymath and Tarmat Ltd) was on 2-11-2020		2 Bids ( Marymatha & Sreedanya) as on 08-02-2021	26-02-2021	Not Yet	Not Yet	3 Bids ( Marymatha, Gawar with Atcon India Ltd JV & Sredanya) was on 2-11-2020	Not Yet	26-02-2021	18-03-2021
Bids Received										
Status	LoA to be issue to M/s Marymatha	Under Procuremnet Stage bids uploaded on 27/01/2021	Under Procuremnet Stage bids uploaded on 23/12/2020	Under Procuremnet Stage Tender uploaded on 12/01/2021	Due to Reserve Forest it kept on hold by KfW	Due to Reserve Forest it kept on hold by KfW	LoA issued to Gawar with Atcon JV	NO Recievd from KfW	Under Procuremnet Stage Tender uploaded on 12/01/2021	Under Procuremnet Stage Tender to be uploaded on 1/02/2021

### Status Package-IV

PKG -IV, M/s EGIS									
Road No.	1	2	3	4	5	6	7, Additional Scope	8, Additional Scope	9, Additional Scope
Road Name	Gandhinagar-Medical College-Babu Chazhikadan road-Kottayam- Parippu road-Athirampuzha Liessue-Kaippuzha-Mannanam-Pulikkuttissery-Parolickal- Muttappally road	Vadayar Chandappalam-Mulakkulam Road and Vadayar Kallattippalam Muttuchira road	Pathanamthitta Ayroor-Muttukudukkallathupa di -Muttukudukka Prakkanam-Prakkanam Elavumthitta-Kulanada Ramanchira-Thannikkuzhy Thonniamala road	Mallapally-Komalam Paduthodu Kalloopara Chengaroor Komalam Kavungumprayar Pattakala, TMV road	Malamekkara Kunnathukala Chala Puthenchanda factory Junction Azad Junction road	Trivandrum Ponmudi road (From Nedumangad to Ponmudi)	Thattararnbalam-Michael Junction-Kochalumood-Mangankuzhy-Pandalam	Veeyapuram-Edathua-Puthukarry-Marnbuzhakkary-Kidangara-Kunnamgary-Kumarangary-Valady-Mullakarthuruthy	Vayuttupuzha-Potheppad Road
District	Kottayam	Kottayam	Pathanamthitta	Pathanamthitta	Pathanamthitta	Thiruvananthapuram	Allapuzha	Allapuzha	Ranni/Pathanamthitta
Length as per ToR (km)	21.95	24.7	28.12	22.65	8.6	41	21.8	21.35	35.00
Length of Road as per actual site (km)	20.197	22.476	28.204	23.129	7.866	41.75	18.657	21.45	39.09
Category of Road	MDR	MDR	MDR	MDR	MDR	SH	SH/MDR	MDR	MDR
<b>Status</b>									
Estimated Cost in Cr	₹ 104.30	₹ 97.50	₹ 97.12	₹ 98.98	₹ 27.67	₹ 203.42	₹ 109.30	₹ 103.91	Not Yet
Bids Received	Sreedanya CC	Begorra Infrastructure & Developers Pvt Ltd	Tervuth Builders, Sreedanya CC & EKK Infra	2 Bids ( PCPL-SM JV), SPL-RM JV	2 ( RM & EKK-K N Madhusudon jv)	Under DPR Finalisation stage	3 Bids ( Tarmat Ltd, Sreedanya & Begorra - PRL Jv)	Palathara Constructions , Sreedanya & Tarmat Ltd	
Status	Awaited NO from KfW for Financial Evaluation Report	Retender stage	Awaited NO from KfW for Financial Evaluation Report	Awaited NO from KfW for Financial Evaluation Report	LoA issued to M/s EKK-KNM JV		Awaited NO from KfW for Financial Evaluation Report	LoA issued to m/s Sreedanya Construction Company	Draft DPR Submitted

## 6 Social Safeguard

Acquisition of 121.5 Ha of land for up-gradation of 7 roads covering 322 km which affected 20696 households including titleholders and non-titleholders. As per the R&R policy of KSTP, entitlements of all PAPs have been disbursed as part of pre-construction activities linked with land acquisition, rehabilitation, and resettlement. As construction works started, 61 missing properties were identified in different packages most of which are required to link the two new bridges at Eranholi and Iritty. Action is being taken for the acquisition of those properties under the LA process and through negotiated purchase and rehabilitation of the affected PAPs.

### 6.1 Land Acquisition Status (LA)

#### 6.1.1 Package UG-III-A – Thalassery - Kalarode road:

Sl No	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	27.100	27.100	KSTP Kannur and LA Tahsildar, LAO Thalassery	Feb.2019	31.01.2021	0.0190

#### 6.1.2 Package UG-III-B – Kalarode – Valavupara road:

No pending issues

#### 6.1.3 Package 8-B – Konni– Plachery road:

Package	Description	Total Required (Ha)	Total in Possession at Start (Ha)	Total to be Acquired (Ha)
Package 8B	Existing ROW	--	--	--
	For Realignment	13.4435	13.4128	0.0307
	Public Land to be Transferred	0.3820	0.3820	0
	Grand Total	13.8255	13.7948	0.0307

#### 6.1.4 Status of Land Acquisition

Sl No	Package & Road	Villages	Extent of land to be acquired	Current status	Remaining work
1.	8A – Punalur-Konni (Punalur-Ponkunnam)	Pathanapuram	73 M <sup>2</sup>	<ul style="list-style-type: none"> <li>Published the declaration U/s 19 of the RFCTLARR Act on 19.06.2020</li> </ul>	<ul style="list-style-type: none"> <li>To conduct award enquiry</li> <li>To pass the award</li> <li>Disbursement of compensation and R&amp;R assistance.</li> </ul>

		<b>Koodal</b>	280 M <sup>2</sup>	<ul style="list-style-type: none"> <li>BVR under preparation</li> </ul>	<ul style="list-style-type: none"> <li>Approval of BVR</li> <li>Approval of DVS</li> <li>To publish declaration U/s 19 of RFCTLARR Act</li> <li>To conduct award enquiry and pass the award.</li> <li>Disbursement of compensation.</li> </ul>
		<b>Sub Toal</b>	353 M <sup>2</sup>		
2.	8B – Konni-Placheri (Punalur-Ponkunnam)	<b>Mylapra</b>	151 M <sup>2</sup>	BVR under preparation R&R Package submitted to LRC on 19.08.2020	<ul style="list-style-type: none"> <li>Approval of R&amp;R Package by LRC</li> <li>Approval of BVR</li> <li>Approval of DVS</li> <li>Publication of declaration U/s 19 of RFCTLARR Act</li> <li>To conduct award enquiry and pass the award</li> <li>Disbursement of compensation and R&amp;R assistance</li> </ul>
		<b>Ranni</b>	206 M <sup>2</sup>	BVR under preparation	<ul style="list-style-type: none"> <li>Approval of R&amp;R Package by LRC</li> <li>Approval of BVR</li> <li>Approval of DVS</li> <li>Publication of declaration U/s 19 of RFCTLARR Act</li> <li>Pass the award and conduct award enquiry</li> <li>Disbursement of compensation.</li> </ul>
		<b>Chethakkal</b>	251 M <sup>2</sup>	BVR under preparation	<ul style="list-style-type: none"> <li>Approval of BVR.</li> <li>Approval of DVS.</li> <li>Publication of declaration U/s 19 of RFCTLARR Act.</li> <li>Pass the award and conduct award enquiry.</li> <li>Disbursement of compensation.</li> </ul>
<b>Sub Total</b>			<b>608 M<sup>2</sup></b>	•	
3.	<b>3A – Thalassery - Kararode</b>	<b>Eranholi &amp; Thiruvangad</b>	1836 M <sup>2</sup>	<ul style="list-style-type: none"> <li>Possession of 4148 M<sup>2</sup> of land has been takeover on 30.07.2020</li> <li>Completed the award enquiry</li> <li>KSTP has released 6.5 Crores on 20.08.2020 for passing the award of 1836 M<sup>2</sup> land.</li> </ul>	<ul style="list-style-type: none"> <li>Possession of 1836 M<sup>2</sup> of land can be taken over on or before 20.09.2020.</li> </ul>

4.	<b>3 B - Kalaroad-Valavupara-SH-30</b>	<b>Kootupuzha Bridge</b>		<ul style="list-style-type: none"> <li>• Forest Clearance from Karnataka Govt obtained.</li> </ul>	<ul style="list-style-type: none"> <li>• KSTP issued letter to EKK to start the work on this bridge. After monsoon will be tackled as informed by Contractor. (Refer Letter Attached given to Contractor from KSTP )</li> </ul>
<ul style="list-style-type: none"> <li>• <b>LRC- Land Revenue Commissioner</b></li> </ul>					

## 6.2 Tree Cutting

The total number of trees to be cut combining the Packages VIII A, B and C is 4000 Numbers and currently, 95 % of these are cut.

## 6.3 Management of Construction induced Issues

Grievance Redressal Committees (GRC) constituted at the district level are functioning effectively under the Chairmanship of the District Collector. All grievances that cannot be resolved locally or at the site are referred to as the GRC which meets once a month making effective decisions followed by actions in the field. Loss of access, protection of wells and houses abutting the road, retaining walls to prevent landslides, prevention of waterlogging, and provision of drainage are the most common issues during the construction phase. These are included in the BOQ and PAP works for implementation. Those issues concerning land value or higher compensation are referred to the State level Committee.

## 7 Grievance Management Report

(1<sup>st</sup> May 2018 – 30<sup>th</sup> November 2020) \*

SI No	Nature of Grievance	Total No. of Petitions	Total No. of cases settled	Remarks
		01.05.2018 to 31.10.2020	01.05.2018 to 31.10.2020	
1	2	3	4	5
1.	Land Acquisition/ Alignment change	4	1	One Case from Muvattupuzha Division and three cases from Kannur Division. Instruction have been given to Muvattupuzha Division for not proceed with LA because the roads are already handed over to PWD roads Division. Slight alignment change was allowed in Mattanoor town due to mass protest from Merchants and other organizations.
2.	Inadequate compensation of land/ Category change of the land	0	0	
3.	LAR Cases	209	161	30LAR cases are pending in various Sub Courts and Appeal pending for 18 cases in various appellate courts.
4.	Variation in the extent of land	0	0	
5.	Acquisition of missed structures/ Part / Full	0		
6.	Inadequate compensation for structures	1	0	The complainant demands KSTP to reconstruct a new house or pay Rs.15, 00,000/- as compensation for the building. KSTP has allotted a total of Rs. 5,32,283/- as compensation for 86 M <sup>2</sup> land and value of the old building. Construction works completed in this area without making any damages to the building. (realigned the road within the available land)
7.	Provision of retaining wall to protect structure	225	113	Major cases are from Package 8 B & 8C area. New proposals are pending. It will be addressed along with civil works in the specific area.
8.	Protection of well	34	10	All remaining cases are from Package 8B & 8C. It will be addressed at the time of civil works in the specific location.
9.	Conversion of part valuation of structure to full or vice versa	0	0	
10.	Inadequacy of R&R assistance	98	98	
11.	Extension of time limit for demolition	11	9	One PSU, KSRTC, requested more time to demolish the building. Another one case is in Package 3 A- auction completed.
12.	Restoration of access to property	235	155	63 cases pending in Package 8B and 8C, it will be addressed during civil works in these locations. 3 cases pending under KSTP Muvattupuzha Division, and 14 cases are progressing in Package 3A and 3B

13.	Providing new access	38	36	One each case pending under Muvattupuzha and kannur Divisions. It will be addressed soon.
14.	Water logging issues	5	5	
15.	Drainage	28	24	2 each Works pending under Muvattupuzha & kannur Divisions. It will be addressed soon.
16.	Encroachment by contractor	2	1	One case in Thiruvalla By pass section. Letter has been issued to Taluk Surveyor for verification and resolves the issue.
17.	Damage to adjacent property	8	7	Work in progress at Mattanoor Junction, damage will be rectified at the earliest.
18.	Shifting Transformer	20	11	Pending cases are from Package 8 B & 8C.
19.	Non-payment of compensation	10	4	Non production of valid documents for claiming compensation.
20.	Reconstruction of cross drainage	17	7	All the 10 cases are from Package 8B & 8C

## 7.1 Compliance of Mission Recommendation

### 7.1.1 Responsibilities of Sociologist in the Division

The role and responsibilities of sociologist in the division is to implement a resettlement action plan (RAP) – ensuring that the affected person/family gets the right information about land acquisition, process and procedures, compensation details and date of payment, persons responsible for grievance redress and counseling when rehabilitation required. S/he should ensure that PAP gets all entitlements/benefits in due time and without delay, refer all grievances to the Grievance Redressal Committee (GRC), and see that those are brought to the notice of the GRC within 15 days and resolved in one month. Disbursement should be made in each village and not in the KSTP office. If any payment pending analyse factors preventing and search for solutions and report facts and figures to EE and PMT. Regarding the pending land acquisition, the sociologist should function as a strategic planner, advise EE on the nature and process of different types of acquisition and monitoring; suggest measures in the form of notes, to speed up. If there is a lack of knowledge, get it through reading and consultations with the right persons. Case studies of each affected individual/family complete with socio-demographic and economic backgrounds should be readily available and presented when called for.

Wherever construction is in progress, the sociologist must focus his/her attention on the mitigation of construction induced negative impacts. Identification and reporting of loss of access from the road to homes, establishments, and properties, dangerous excavations without protective measures and barricades, threat or damage to adjacent properties, encroachment by contractor, waste dump in adjacent land, a threat to buildings and wells, and other utilities (water, electricity, telecom & cable services requiring protection from damages, prevention of flooding, waterlogging in front of habitations and establishments, and any activity that can cause harm to human beings and animals. Should ensure that no excavation or demolition is done without reasonable advance notice and without providing temporary measures to provide access. Temporary measures should be replaced by a permanent solution within a couple of weeks or at least in one month. Daily and weekly reports in writing should be given to the appropriate forum for necessary action based on the urgency.

A third angle of sociologist's responsibility is to monitor the welfare of the workers in camps and worksite. Living conditions in the camp should be hygienic, working conditions secure, with proper gears and tools, availability of toilets, and safe drinking water at work site. If anything is lacking it should be brought to the EE immediately and to PMT in the monthly report.

Responsibilities remain incomplete without monthly reporting which should be comprehensive and regular. The report and case studies should be substantiated well with the details of the subject matter with the date and time of each activity spliced with relevant photos. The project is time-bound. The Action Plan should specify dates for each

of the activities. The statement commonly used, such as, “Action being taken or attended to” does not mean anything. It should be specific, what activity will start, and when – it should begin on a day and end on a particular date. The proforma for social audit circulated a month ago must be completed and returned to PMT for analysis and final reporting before taking over roads from contractors. It should include all mitigation measures done at the site for each PAP. Hence verification at the site is necessary.

## 7.2 Payment to the consultants and Contractors as on end of January 2021:

Sl. No	Firm/Organisation	Works Services	Amount in INR
1	M/s Egis India JV	CSC For Packages I, II, IIIA, III B, Iv A, IV B, V,	56,24,10,204/-
2	M/s MSV International	CSC for Package VI	4,67,41,766 /-
3	M/s Vic Roads		11,07,89,698 /-
4	M/s L&TP Ramboll	Transaction Advisors	4,22,10,480 /-
5	M/s EptisaServicios De Ingeneiria	PMC for KSTP-II Project	3,09,71,703 /-

## Contractors

Sl. No	Name of Contractor	Project / Pkg No	Amount in INR
1	M/s.RDSProjects Limited	Kasargod-kanhangad-SH-57 KSTP-2/UG/1	1,22,85,65,038 /-
2	M/s.RDS Projects Limited	Pilathara-Pappinssery-SH-67 KSTP-2/UG/2	102,60,01,677 /-
3	M/s.Dinesh Chandra R. AgarwalPvt.Ltd.,	Thalassery-Kalaroad-SH-30 KSTP-2/UG/3A	111,58,34,408 /-
4	M/s.GHV-EKK Infrastructure & Co.	Kalaroad-Valavupara-SH-30 KSTP-2/UG/3B	195,25,66,323 /-
5	M/s.GHV-EKK Infrastructure & Co.	Thiruvalla bypass KSTP-2/UG/4A	16,98,56,283 /-
6	M/s.EKK Infrastructure Ltd.,	Thiruvalla town KSTP-2/UG/4B	4,83,87,988/-
7	M/s.GHV-EKK Infrastructure & Co.	Kazhakuttom-Adoor KSTP-2/OL/8	124,43,05,031 /-
8	M/s.EKK Infrastructure Ltd.,	Konni- Placherry KSTP-2/OL/8B	55,81,82,380/-
9	M/s. Sreedhanya Construction Company & M/s Nath Infrastructures	Punalur – Ponkunnam road KSTP-2/OL/8C	104,63,73,666/-
10	M/s.EKK Infrastructure Ltd.,	Painavu-Thannikandom KSTP-2/PMT/RKI 3	1,90,80,000/-
11	M/s.EKK Infrastructure Ltd.,	Adoor- Chenganoor KSTP-2/PMT/RKI 4	7,54,10,749/-
12	M/s.DRAIPL-GREENWORTH(JV)	Chemmanar Gap Road KSTP-2/PMT/RKI 2	2,93,34,500/-

## 8 Compliance Governance Improvement Action Plan

### 8.1 (Micro level implementation will be done with help of PMC)

<i>1. Take Swift Punitive Action</i>		
<ul style="list-style-type: none"> <li>Blacklist relevant companies and terminate officials per government rules have engaged in misconduct</li> </ul>	:	Will be done on receipt of evidence
<ul style="list-style-type: none"> <li>Address any performance issues among PMT officials and consultants</li> </ul>	:	Will be addressed
<i>2. Address outstanding contractor Related Matters</i>		
<ul style="list-style-type: none"> <li>Clear the backlog of payments and variation order requests</li> </ul>		Cleared except disputed variation in Package VI
<ul style="list-style-type: none"> <li>Follow-up on quality issues and conduct tests where relevant</li> </ul>	:	Being followed up. Arrangement for verification of all newly constructed bridges done
<ul style="list-style-type: none"> <li>Exercise where warranted contractual remedies vis-à-vis contractors, design and supervision consultants</li> </ul>	:	This will be exercised when required
<i>3. Build a New Foundation</i>		
<ul style="list-style-type: none"> <li>Develop an action plan to strengthen integrity risk management w/oversight by the stable management team</li> </ul>	:	All managerial positions filled
<ul style="list-style-type: none"> <li>Clearly delineate PWD’s role (also make the KSTP the incubator of new approaches)</li> </ul>	:	This will be done. Already directions towards PWD role is given
<ul style="list-style-type: none"> <li>Augment as required the PMT staffing</li> </ul>	:	<ul style="list-style-type: none"> <li>i. Project Management Consultant being engaged– bidding in progress</li> <li>ii. Probity Advisor being posted</li> <li>iii. Community liaison officer being posted</li> </ul>
<ul style="list-style-type: none"> <li>Communicate GoK’s zero-tolerance vis-versa PMT and PWD officials as well as contractors and the public</li> </ul>	:	This will be done

### 8.2 Key controls as part of the Action Plan:

<i>A. Approval of variation orders and payments</i>		
<ul style="list-style-type: none"> <li>Reduce the number of officials involved in assessing and signing off on IPCs and variation orders</li> </ul>	:	This was done
<ul style="list-style-type: none"> <li>“Force” contractors and supervision consultants to explicitly certify compliance with contractual obligations</li> </ul>	:	Orders issued

<ul style="list-style-type: none"> <li>Revise the Financial Management manual to detail the process and individual accountabilities</li> </ul>	:	This is being done
<ul style="list-style-type: none"> <li>Consolidate in a decision memo to the Project Director the view of engineers and finance staff</li> </ul>	:	This is being arranged
<ul style="list-style-type: none"> <li>Establish a service standard for the timeliness of approvals</li> </ul>	:	This is already in place
<ul style="list-style-type: none"> <li>Don't allow consultants and contractors to take advantage of savings by adding what is not truly needed</li> </ul>	:	This will be followed strictly
<ul style="list-style-type: none"> <li>Update regularly an "exception report" with all outstanding payment requests and variation orders; identified quality issues; planned and how tests; unavailability of machinery and PMT, SC, and contractor staff; any shortfall in PMT liquidity compared to received and expected payment before next tranche; and revised cost estimate compared to the contract price and original estimate</li> </ul>	:	Will be done
<b>B. Procurement of Goods, Works, and Services</b>		
<ul style="list-style-type: none"> <li>Undertake a market survey of road contractors to improve competition and reduce collusion risks</li> </ul>	:	This is being arranged through experts being mobilized – bidding is on
<ul style="list-style-type: none"> <li>Develop more precise cost estimate so you can gauge if collusion risks are elevated</li> </ul>	:	This will be done
<ul style="list-style-type: none"> <li>Require independent bid certificates</li> </ul>	:	This is being insisted
<ul style="list-style-type: none"> <li>Institute a code of conduct for PMT and PWD officials re-reporting of misconduct, conflicts of interest, etc.,</li> </ul>	:	Will be instituted
<ul style="list-style-type: none"> <li>Apply an integrity due diligence checklist to spot in bids red flags of fraud, collusion, and unbalanced bidding</li> </ul>	:	This will be followed
<b>C. Quality Assurance</b>		
<ul style="list-style-type: none"> <li>Operationalize the committee recently constituted to review compliance with quality control</li> </ul>	:	The committee chaired by the Chief Engineer, KSTP is reviewing the quality of works periodically
<ul style="list-style-type: none"> <li>Create a quality assurance protocol with a clear escalation mechanism with a specific focus on structural/ bridge works</li> </ul>	:	This has been developed and passed on to the Field Engineers. Quality audit as per the Quality Assurance protocol is underway

<ul style="list-style-type: none"> <li>Organize monthly review meetings and quality clinics and discuss the exception report and assess compliance</li> </ul>	:	This is arranged
<ul style="list-style-type: none"> <li>Make full use of the existing IT-based quality assurance system to enhance transparency on the quality assurance system</li> </ul>	:	The quality Specialist position is included in the PMC. This will be developed with the help of PMC
<ul style="list-style-type: none"> <li>Manage carefully integrity risks associated with failed tests</li> </ul>	:	Non conformance are recorded and re-tests arranged after rectification
<p><i>D. Performance Management</i></p>		
<ul style="list-style-type: none"> <li>Develop a scorecard to track the quality, timeliness, and price of the PMT's work, and make it public –significant fraud and corruption always impact these indicators</li> </ul>	:	This is being arranged

## 9 ACCIDENT REPORT

World Bank expressed the necessity to analyse the accident database concerning the database before the up-gradation of these roads. CSC has been instructed to collect the data from Police stations for these roads before implementing the up-gradation and compare this with the same after the roads are opened for road users.

The monthly accident report for the Period of January-2021 is as below for Package III A and III B. Since work is not going due to the Covid-19 pandemic in the Packages IV A and IV B, no accident data is provided as of now. However, after completion of these two roads and allowing the road users, the past and present data shall be collected and analysed. There were no accidents data January-2021 in Pkg 3A & 3B was available.

### 9.1 Accident Report Pkg-3A

Nil

### 9.2 Accident Report Pkg-3B

Nil

### 9.3 Accident Report Pkg-8B

Nil

### 9.4 Accident Report Pkg-8C

Nil

## 10 Site Work Progress Photographs

### 10.1 Package -3A –Photographs



**BC LAYING @ 1+320 - 1+990 LHS**



**BC LAYING @ 2+100 - 2+520 RHS**



**BC LAYING @ 2+420 - 2+525 LHS**



**DBM LAYING @ 15+580 RHS SIDE ROAD**



**GIRDER CASTING @ 2+910 (P3-A2)**

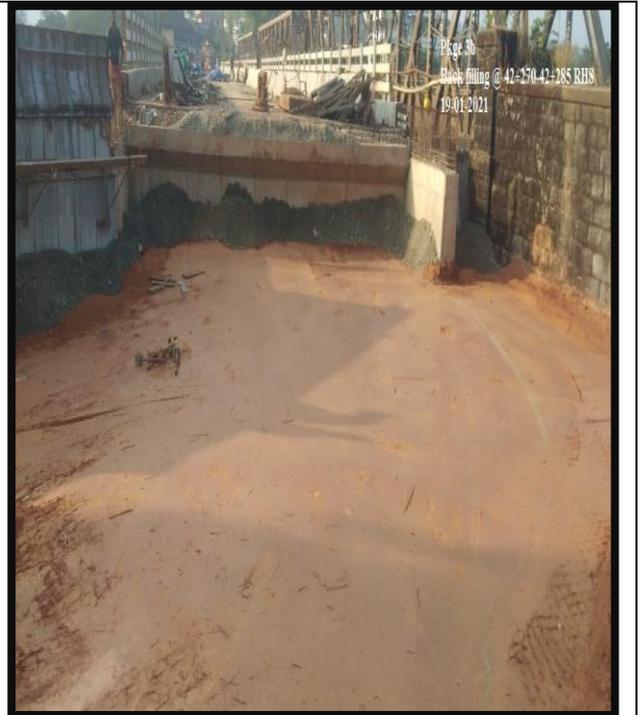


**REINFORCEMENT WORK IN PROGRESS FOR RAFT @ 3+000 VUP**

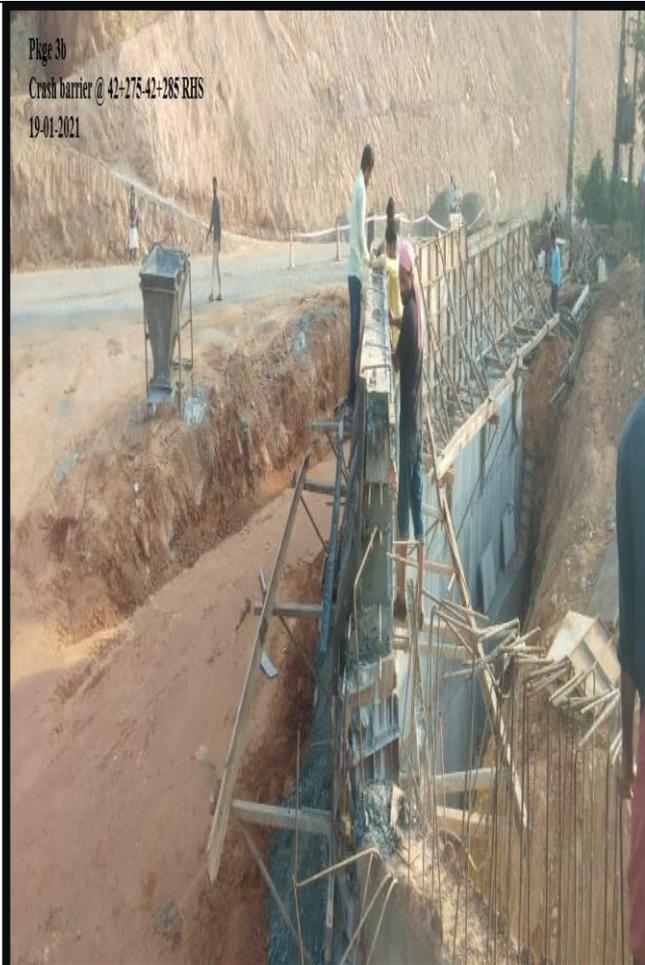
## 10.2 Package -3B —Photographs



Access Road DBM Completed (km 41+060 RHS)



Back filling at A2 side approach of Iritty Bridge.

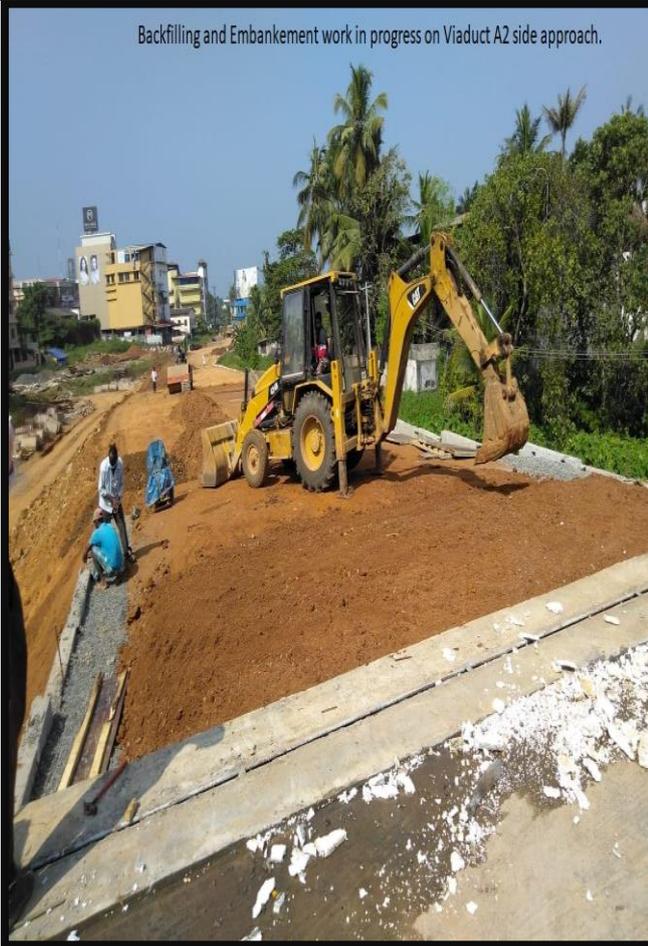


RCC crash barrier over retaining wall at A2 side approach of Iritty Bridge (km 42+275 to 42+285 RHS)



Kootupuzha Bridge Pier P3 Raft completed.

### 10.3 Package -4A –Photographs



**Back filling work at A2 side approach of viaduct.**



**Crash barrier concrete work, viaduct**

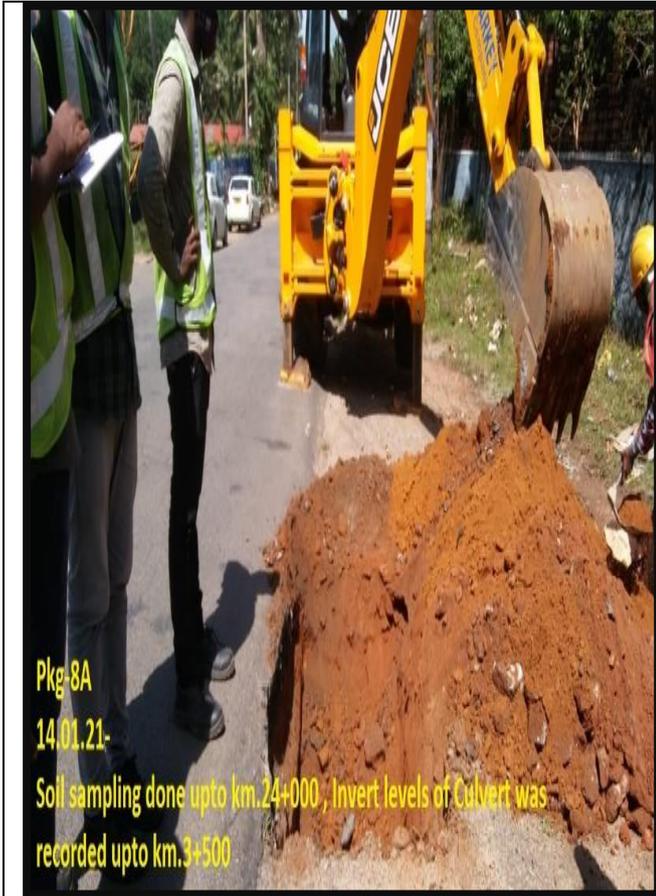


**Pipe culvert concreting works at 2+185**



**Embankment filling work at A2 side approach of Viaduct.**

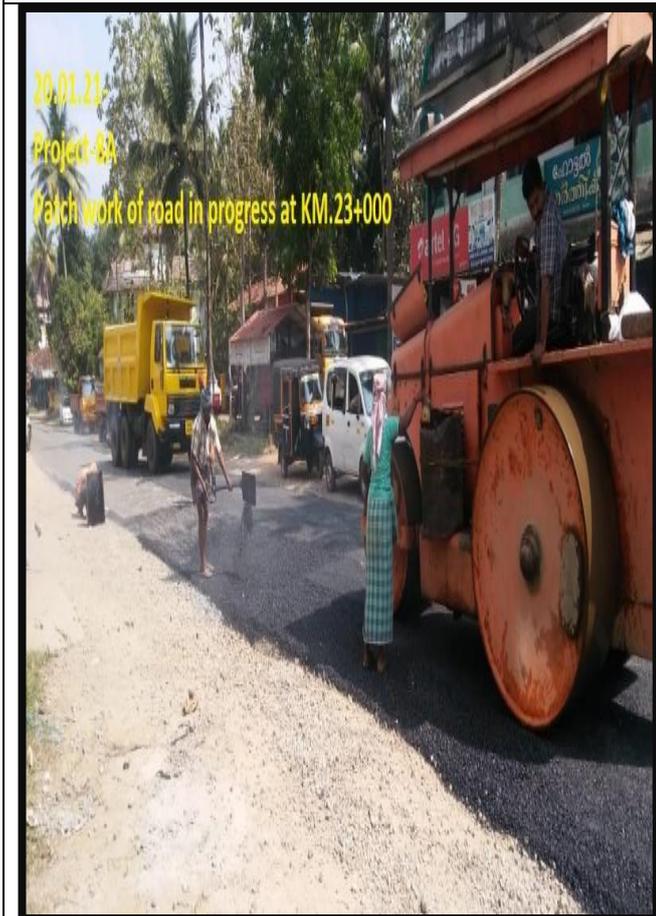
### 10.4 Package -8A—Photographs



**Soil sampling work in progress at km.24+000**



**Potholes filling work in progress**

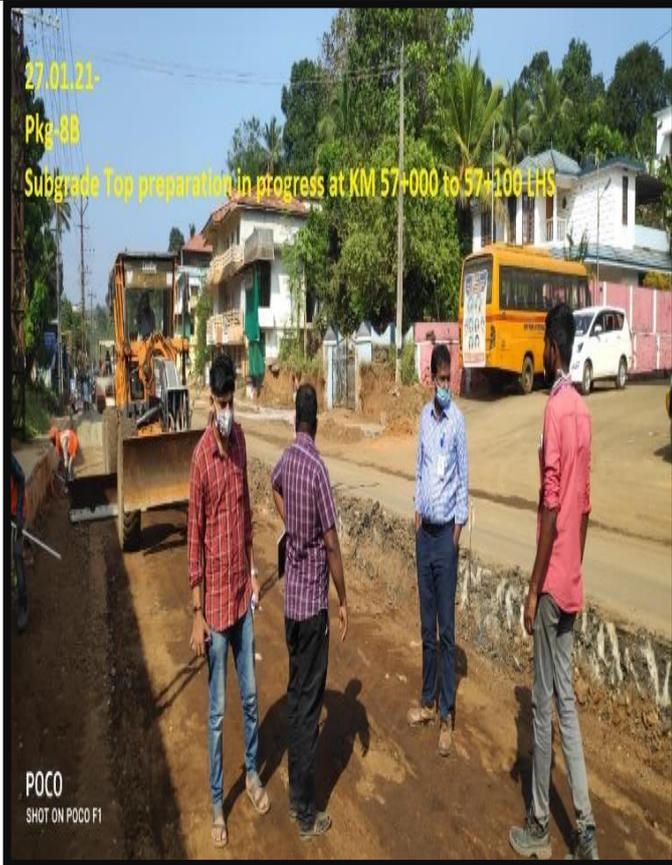


**Potholes filling work in progress**



**Earth work excavation work in progress at km.2+450**

### 10.5 Package -8B-Photographs



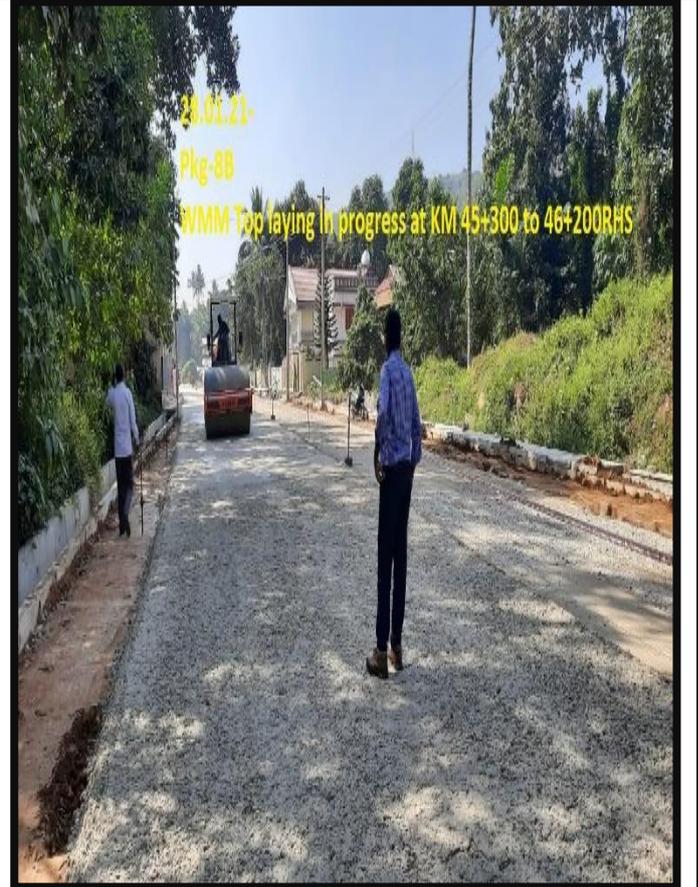
Subgrade work in progress at km.57+000 to 57+100



Subgrade work in progress at km.59+400 to 59+490



Box culvert slab reinforcement work in progress

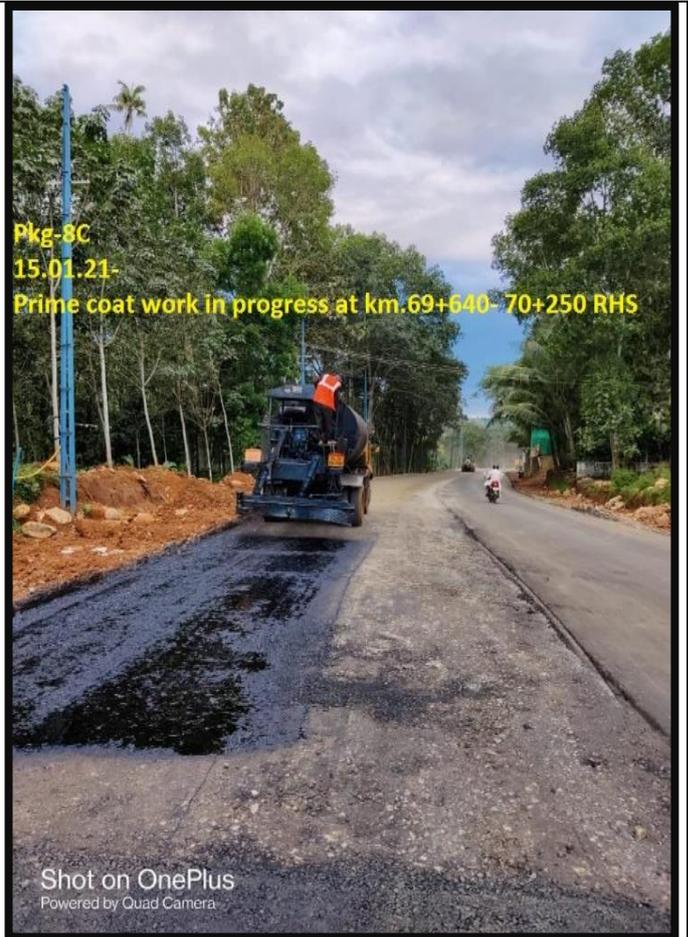


WMM Laying work in progress at km.45+300 to 46+200

### 10.6 Package -8C–Photograph



DBM Laying work in progress at km.60+00 to 60+230



Prime coat work in progress at km.69+640 to 70+250

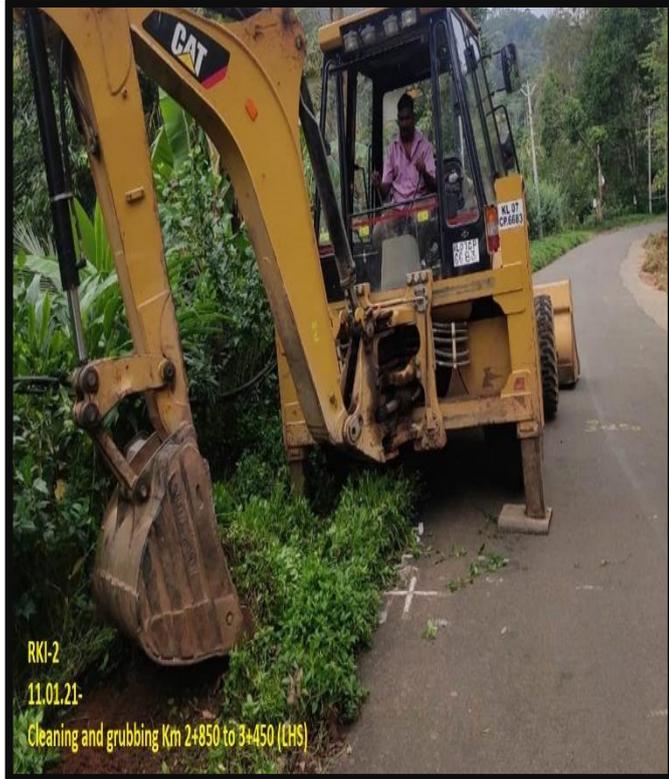


FDD Testing work in progress for WMM top layer from 60+830



Retaining wall work in progress at km.71+210 to 225

### 10.7 RKI 2 Road –( Chemmanar-Gap road) Photographs



**C&G work in progress at km.2+850 to 3+450**



**Earth work excavation work in progress at km.0+400 to 0+500**



**Site Inspection by RE,ME,ARE,Social Expert**



**Box culvert excavation work in progress at km.2+090**

### 10.8 RKI 3 Road –( Painavu-Ashokakaval road) Photographs



Site visit along with RE,ARE,ME,Social



Gabion wall work in progress



Aggregate AIV testing in progress



Box culvert concreting work in progress



Box culvert work in progress



Gabion wall 6th lift at 0+985 LHS

### 10.9 RKI 4 Road –(Adoor to Chengannur) Photographs



**BC Overlay work in progress**



**Kerb laying work in progress**



**Guard rail work in progress**



**BC overlay work in progress**



**Box culvert work in progress**



**Gabion wall work in progress**

### 10.10 SCDP Road –Component B –Photographs



Ladder hatching & hatch marking

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School Zone Treatment

-----End of Report-----